A FIRST

GEOGRAPHY OF GOA

G. S. AMONKAR, B. A.

A FIRST GEOGRAPHY OF GOA

WITH MAPS AND ILLUSTRATIONS

By

G. S. AMONKAR, B. A.

PRINCIPAL, ANGLO-PORTUGUESE INSTITUTE,

MAPUÇA, GOA.

Foreword by

C. R. PINTO, B. A., B. T.

PROFESSOR OF HISTORY & GEOGRAPHY,

I. M. M. T. S. DUFFERIN.

Price : One Rupee.

COPYRIGHT

First published,	*May,*	*1939*
Second Edition,	*August,*	*1939*
Third Edition,	*June,*	*1941*
Reprinted,	*October,*	*1943*
Reprinted,	*June,*	*1946*
Reprinted,	*Nov.*	*1947*
Reprinted,	*Febru.*	*1950*

THE GOMANTA PRESS

Margão-Goa.

FOREWORD

It is a privilege to write a Foreword to a publication that breaks entirely a new ground, and whose need was so acutely felt by the schools of Goa. I have read the book with some care and I find it fascinating to a degree. The book has been prepared to meet the special requirements of elementary schools and it is expected that it will receive great encouragement from the heads of schools in Goa. The easy, connected narrative and simple style of Mr. Amonkar's Geography of Goa should make it a great favourite with students of Goa High Schools.

The author, a talented scholar, possesses the rare combination of knowledge and precision, the qualifications so indispensable for a writer of such a publication. With him Geography has been, more or less, a passion. He has travelled extensively in Goa and is intimately connected with the mentality of Goan boys and has long experience of Goan conditions. He has been very successful in giving clear explanations, suitable exercises and well selected maps and illustrations by means of which the pupils or students will gain valuable help in their work. This book should be in the hands of everyone interested in the teaching of Geography. I recommend this book for class use.

I am confident that Mr. Amonkar's Geography of Goa will not only be a work indispensable for children studying in lower standards but will also be a store of invaluable information to a layman and a foreigner visiting Goa.

BYCULLA,
BOMBAY.

C. R. Pinto.

PREFACE

The task of writing this book was undertaken with a view to satisfying a long-felt need. A suitable text-book for teaching the Geography of Goa is a great necessity, and this has been intensely felt by me in teaching the subject for the last twelve years.

Geography being a human science, a skilful teacher tries to make it interesting to a child from the very beginning of his or her school career, and the immediate surroundings of the child are best used as means towards the end. For the same reason the study of a village, a taluka or a district must precede that of a country or the world in the treatment of the subject. Each can be treated as a region or geographical unit, though the country as a whole or the world may not be lost sight of.

I have followed the same principle in writing this book. It can be conveniently used in the lower standards of English schools in Goa; and it takes for granted some previous elementary knowledge of the geography of a village or a taluka. The book has been written with a view to help both the child and the teacher. The sequence followed may be fairly dispensed with by a skilful teacher, some of the later chapters being conveniently taken up earlier for treatment. My aim has been to give him more of matter and less of method, the latter being solely his own province. It is hoped that both the child and the teacher will be saved the unnecessary waste of time and energy in keeping themselves busy with notes on the subject.

The book being primarily designed for children, its language has been made deliberately simple. The book may still have

many defects, and proper suggestions from teachers will be welcome in that they will enable me to effect improvement in the next edition.

I am deeply indebted to Prof. C. R. Pinto, B. A., B. T., of the I. M. M. T. S. Dufferin, Examiner in Geography to the University of Bombay, for having been kind enough to go through the manuscript, for his useful suggestions and for the Foreword with which he has been good enough to honour this book. I am ever grateful to my friends, Prof. Ramchandra Shankar Naik of the Normal School, Nova Goa, for carefully preparing the maps, and Mr. Damodar A. Kare, the proprietor of the Gomanta Press, for his invaluable help in facilitating the printing and publication of this book. My sincere thanks are no less due to my friend and colleague, Mr. L. M. Ratus, for his kind help in typing the manuscript for press, and to my friend Prof. Balkrishna V. Sanvordekar for allowing me the use of his blocks for illustrations.

I hope the book will fulfil to some extent the purpose for which it is written.

Parra, Bardez-Goa.
15 th may, 1939

G. S. Amonkar.

PREFACE TO THE THIRD EDITION

The present edition has been both revised and enlarged. An attempt has been made to insert a new, separate chapter on the Water of Goa, giving a fair amount of information about its fountains, lakes and rivers. The portion dealing with the soil has been recast with a view to giving the student a proper knowledge of the varieties of soil found in Goa. Different kinds

of garden crops, the specialities of this land and their localities have also been mentioned. It is hoped that these additions together with the products will enable students to form some idea of the agricultural life of the country. I heartily thank the educationists and the heads of schools for kindly sending their opinions on the book, the extracts from some of which I have taken the liberty to publish. My sincere thanks are also due to the heads of the schools who have been generous enough to adopt the book in their institutions.

I feel confident that this edition too will receive the same warm welcome as the previous ones.

Parra, Bardez-Goa,
22nd June, 1941.

G. S. Amonkar.

EXTRACTS FROM SOME OF THE OPINIONS

"..... I have read the book with both pleasure and profit. It is well written, and the simplicity of its style and the amount of information it contains should make it a very useful text-book in our schools.

All praise is due to you for breaking new ground. The work must have cost you a good deal of labour and original research, and I have no doubt that it will have the success which it so well deserves."

PATROCINIO D'ANDRADE, M. A., LL. B.
Professor of Logic and Philosophy
Elphinstone College, Bombay.

..... The book reveals the author's mastery of the subject. His treatment of the subject matter is logical and every

detail receives its due share of the author's attention. The book, therefore, ought to serve in an admirable manner the purpose for which it has been brought out. I am quite sure the book will be found very helpful and interesting by the pupils for whom it is meant and I gladly commend it to their notice."

V. R. NERURKAR, M. A., T. D. (Lond.)
M. R. S. T. (Eng.)
Fellow, University of Bombay.
Principal, Chikitsaka Samooha Shirolkar
High School, Bombay.

"..... I was indeed pleased to read through it, and found the presentation of the matter such as would suit the needs of our lower classes. I must congratulate you on your initiative and successful completion of such useful work."

Rev. PHILIP MENDONÇA, M. A.
Rector, St. Joseph's High School,
Arpora, Bardez, Goa.

"..... I must congratulate you on producing a book which supplies a real long-felt need. It is a cleverly written and perfectly intelligible text-book, and will prove a boon to the student community."

EDWARD J. SOARES, B. A.
Principal, St. Thomas's High School,
Aldona, Bardez, Goa.

CONTENTS

		PAGE
1.	WHAT IS GEOGRAPHY?	9
2.	THE BUILD OF A COUNTRY	12
3.	THE BUILD OF GOA	14
4.	THE WATER OF GOA	22
5.	THE CLIMATE OF GOA	27
6.	THE PRODUCTS OF GOA	32
7.	„ „ (*continued*) ...	38
8.	„ „ „ ...	45
9.	„ „ „	53
10.	THE OCCUPATIONS OF THE GOANS ...	59
11.	THE POPULATION OF GOA	61
12.	LANGUAGE AND EDUCATION OF THE GOANS	63
13.	THE TRAVEL AND TRANSPORT IN GOA ...	68
14.	THE TRADE OF GOA	79
15.	THE PLACES OF INTEREST IN GOA ...	90

A FIRST GEOGRAPHY OF GOA

WHAT IS GEOGRAPHY ?

We know that this earth of ours is a big spinning ball moving in the sky round the sun. Its surface is covered with land and water. The land is divided into five big parts called "Continents". And the water is divided into five large "Oceans". The land and the water on the surface of the earth are surrounded by the air which covers it to a height of about hundred to two hundred miles. When we speak of the Earth, therefore, we mean the land, the water and the air together. It is called our World.

The Earth is so very important to us because we live on it, all over activities take place on it. Men live in different countries which are the divisions of the continents. They live on the land. They build their houses on it. They grow their crops in the soil, and thus get their food. They let their cattle graze on grasslands. They get mud and stones from the land for their houses. They dig out of it minerals, such as slate, chalk, marble,

gold, silver, copper, iron, coal etc. They dig canals on land to water their crops. They make roads and railways for travelling and for carrying their goods from one place to another. This, therefore, shows that the land is of a very great importance to man.

The water in the seas, rivers, lakes, etc., is also of great use to us. It is turned into vapour, and clouds, and rain. Rain waters our crops, trees and forests. It feeds the rivers that flow down the mountains and also sinks into the ground to feed the springs of our wells. The fresh water of rivers, wells and tanks is used for drinking and for watering our crops. Waterfalls are used for producing electricity. We sail on seas and rivers and carry our goods in ships and boats. The water of the sea, rivers, lakes, ponds, etc., also provides us with plenty of fish. We get salt from sea-water. Thus we see that the water on the surface of the earth is of a very great use to man.

The air too is very useful to us. We breathe air and thus live by it. The plants, trees and animals, so very useful to us, require air. The air makes us feel hot or cold, warm or cool, and thus gives us our seasons. It takes the vapour up and forms it into clouds which float in it. It brings them down in the form of rain. It also gives us

breezes and winds. The cool winds coming from the sea bring us clouds and rain. They make us feel cool in the warm season. Likewise, the warm winds blowing from the sea bring us warmth in the cold season. The air is, thus, like the land and the water on the surface of the earth, very useful to mankind and to every other kind of life.

Every country has its land, water and air, and its plants and animals depending on these. And the life of man in the country in turn depends on its land, water and air, and its plants and animals. Geography tells us how this happens in the different countries of the world. It tells us about their land, water, air, plants and animals and also of the people who use them to suit their needs. In short it tells us how people have made different countries their homes. Geography is, therefore, a study of the world as the home of man.

In this little book we are going to study the Geography of Goa. We shall learn about this small country of ours which is a part of India. We shall learn about its land, water and air, and also about its plants, animals and people. We shall study our life and activities in this land. In short, we shall see how Goa has been our home — the home of the Goans.

EXERCISES

1. What do we mean by the world ?
2. How do we use the land in our village ?
3. How is wáter useful to us ?
4. What would happen if there were no air ?
5. What have we to learn in the Geography of Goa ?

2. THE BUILD OF A COUNTRY.

In learning the Geography of a country the first thing we have to study is its "land" i. e. its "build" or "relief". To learn this we must know three things: 1) Where the land is built; 2) how it is built; and 3) of what it is built.

1) *Where the land is built*: In order to learn where a land is built we must try to understand the following things :—

a) The general situation : This will tell you where the land lies in relation to the whole country of which it is a part.

b) The exact situation : This we can learn by knowing the boundaries or limits of the country.

c) The situation as regards land and sea : This will show you whether the country is near the sea or far away from it.

d) The situation as regards mountains : A mountain may have two sides, the windward

side and the leeward side. The side which faces the wind coming from the sea is known as the windward side. The opposite one is known as the leeward side. A country may lie to the windward or the leeward side of a mountain.

This situation of a country as regards land, sea and mountains has a great deal to do with its rainfall and climate as we shall see later on.

2) *How the land is built*: In order to study this we must try to learn the following things :—

a) The shape of the land : This tells you what the country looks like.

b) The size of the land : This will enable you to understand how large the country is.

c) The level of the land : This will show you where the land is high and where it is low. It will show you the highlands and the lowlands of the country. The highlands may consist of mountains, hills or tablelands; and the lowlands may be plains like fields, or may be river valleys.

d) The nature of the coast : This will show whether the coast of a country, if it has any, is broken by mouths of rivers, bays, gulfs etc., or is unbroken. A broken coast, free from rocks,

gives us good ports and harbours as we shall see afterwards.

3) *Of what the land is built :* This will tell you about the rocks or minerals of which the land is made. It will also show you the nature of the soil. A soil may be rich or poor; it may be hard or soft. The nature of the soil has a great deal to do with the crops and the plant life of a country. Rocks may abound in rich minerals.

EXERCISES

1. What is the situation of your village ?
2. How large is your village more or less ?
3. Draw a map of your village and mark therein its highlands and lowlands.
4. Make a collection of the different soils and rocks in your village.

3. THE BUILD OF GOA

The first thing we have to learn is where Goa is built, i. e., the situation of Goa. It may be of four kinds as we have already seen : *a*) The general situation of Goa ; *b*) its exact situation ; *c*) its situation as regards land or sea ; *d*) its situation as regards mountains.

a) *The general situation of Goa :* If we look to the map of India, we find that Goa lies in the middle of the Western Coastal plain. This situa-

tion greatly helps in trading with the northern and the southern parts of the coastland.

b) *Exact situation of Goa* or *the boundaries of Goa:* Goa is bounded on the north by the river Terekhol [Tiracol], which separates it from Vengurla and Sawantwadi. To the east of it lie the Western Ghats [the Sahyadri], which cut it off from the districts of Belgaum and North Kanara; and to the west lies the Arabian Sea.

c) *The situation of Goa as regards land and sea* Goa lies near the sea and thus it gets the full benefit of the sea-winds and the monsoons.

d) *The situation of Goa as regards mountains* Goa lies on the windward side of Western Ghats gradually sloping down and extending to the Arabian Sea. This also gives it full benefit of the monsoons and rainfall as we shall see later on.

After having seen the situation of Goa, let us find out the next thing, i. e., how it is built. To study this we must know, as seen before, [*a*] the shape of Goa, [*b*] the size of Goa, [*c*] the level of the land of Goa, i. e., its highlands and lowlands, and [*d*] the nature of its coast.

(*a*) *The shape of Goa:* The shape of Goa is nearly like a triangle. The longest side

of this triangle is about (sixty-two miles) in length and runs along the sea. The shortest side, about forty miles in length, is very irregular and forms the northern border of the country. The third side, about fifty-five miles in length, after running for about thirty miles, takes a curve south-westwards and joins the coast-line. The shape of Goa almost resembles a bean (*alsando*).

b) The size of Goa : The greatest length of Goa from north to south is about sixty miles, and its greatest breadth from east to west is about forty miles.

c) The level of the land of Goa : To learn about the level of the land of Goa we must know the different parts or districts into which it is divided. The districts are called "Concelhos" and are eleven in number. They fall into two divisions :— The **Novas Conquistas** (the New Conquests) and the **Velhas Conquistas** (the Old Conquests). BARDEZ, ILHAS (The Islands of Goa), SALCETE and MORMUGAO or Marmagoa, an extension of Salcete, make the Old Conquests. They were conquered by the Portuguese a little earlier. PERNEM, SANQUELIM, SATARI, PONDA, SANGUEM, QUEPEM and CANACONA, these seven, make the New Conquests. They were conquered later.

The Old Conquests are almost lowlands with a few hills here and there. The New Conquests

GOA
ARABIAN SEA
SALCETE
PERNEM
BARDEZ
TISWADI
MORMUGAO
QUEPEM
SANGUEM
CANACONA
SANGUEM
CANACONA

are almost highlands, being full of hills and spurs of the Western Ghats.

If we face Goa from the west with our back to the sea, we find that the lowlands of the Old Conquests, viz., Bardez, Ilhas and Salcete [Marmagoa included] go on gradually rising on all sides into the highlands of the Western Ghats. They form a semi-circle, extending from the district of Pernem in the north to the district of Canácona in the south. The mighty walls of the Western Ghats thus rising on the northern and eastern borders of Goa, throw off into the country many big spurs within a short distance of each other. These in turn break up into numberless hills which run over the length and breadth of the country as far as the sea. These hills and their branches form many ravines and valleys, and a number of broad open fields over the whole territory of Goa.

Goa is thus a land of hills, valleys and fields. As we go seaward, the hills get scarcer, being a few in number over the lowlands of Bardez, Ilhas and Salcete.

Satari, lying in the north-eastern corner of Goa, and being the most mountainous of the districts, contains some of the most important peaks. In the order of their heights they are: SONSOGAD [3,827 ft.], CATLACHI MAULI [3,633 ft.], VAGUERI [3,500 ft.], MORLEM-GAD [3,400 ft.] and OLONG

(1,754 ft.). Besides these we have CHANDRANATH (1,054 ft.) near Paroda in the district of Salcete with its fine temple of Chandreshwar, SIDDHANATH (1,242 ft.) at Borim in the district of Ponda, MORPIL (1,454 ft.) in the district of Quepem and DUDHSAGAR (2,000 ft.) in the district of Sanguem with its beautiful waterfalls falling from a great height into the valley below.

(*d*) *The nature of the coast of Goa* : If we look at the map of Goa, we find that its coast-line is not all straight. It is more broken in the north than in the south. It is broken by the mouths of the rivers that join the Arabian Sea. These openings make some good ports, of which Pangim and Marmagoa are important.

There are a number of beaches on the coast of Goa. Here people go for a change during the hot months of March, April and May. The beaches of Bardez and Salcete have been turned into summer-resorts. Calangute in Bardez, and Cansaulim, Majorda, Benaulim and Colva in Salcete are well-known as such.

The coast of Goa is also used for fishing. It is mostly shallow. Fish abound in shallow waters and hence they are caught here in lots.

Of what is Goa built ? : To answer this question we must find out the substance or matter of which the land of Goa is made. We must learn about its

rock and soil. The highlands of Goa including the slopes of the Western Ghats are mostly rocky. The Ghats and their spurs in the country are made almost of black rock. The other highlands are made mostly of red rock; but they too may contain blocks of black rock here and there. The highlands are also full of many other kinds of rocks, of which we shall learn in detail later on.

The lowlands of Goa, viz., its fields and valleys are made of a rich soil called "loam". It is a loose soil consisting of sand, clay and decayed animal and vegetable matter. The soil has been made out of the rocks which once formed the land-mass of Goa. The rocks have been worn out by the sun, wind, rain, the running water of rivers and streams and by the constant beating of sea-waves for thousands of years. Some rocks are turned into yellow sandy soil, some into black clayey soil. The soil of the fields and valleys of Goa is more sandy and less clayey. It is a rich soil containing more of sand and less of clay. Hence it is called "sandy loam". It is mostly yellowish-brown in colour.

If we dig the surface of the earth, first we find soil. It is made up of very fine grains of stones or rocks which lie below it. It is mixed with the remains of plants and animals that decay in it. Grasses, plants and trees grow in this soil and suck their food from it. As we go on digging, the soil

gets harder and harder and is mixed with stone and gravel. Then we come across the main rock of which the soil is formed by its being worn out. The soil is of the same colour and substance as the rock below it. The stuff it is made up of feeds the plants, and the more of animal and vegetable decay it contains, the richer it turns.

As we come down from the hilly or mountainous parts towards the sea, the depth and richness of the soil go on increasing. The lowlands contain more of soil than the highlands. The soil is made up of very fine grains of different kinds of rocks of the highlands. It has been washed down by rain, streams and rivers and is collected on the lowlands. It is also mixed with the remains of plants and animals, thus making it richer. The soil thus washed down by rivers in their course and placed on their beds, banks and at their mouths is called "silt" or "alluvium" or alluvial soil.

This is the reason why the lowlands at the foot of the hills and the mountains in Goa are richer, and the fields on the banks of the rivers and on the coastlands are richer still. We plant coconut palms and build our houses on the lowlands at the foot of the hills and grow our paddy and garden crops in the fields. The hills are used for growing caju trees and bamboo, and the valleys in the interior for areca-palms. Thus we may group

the three kinds of soil in Goa as: 1) The caju-bamboo soil, 2) the areca-coconut soil and 3) the paddy soil.

From what we have learned so far we can see that the fields on the coastland, specially those in the lowlands of Bardez, Ilhas and Salcete are the richest. The hilly and mountainous parts are either rocky or covered with hard, poor soil full of stone and gravel. For this reason, the Old Conquests are more widely cultivated than the New Conquests.

EXERCISES

1. What are the mountains that lie on the borders of Goa ? To what side of them does Goa lie ? Name any district on the leeward side of the mountains.
2. Which parts of Goa are more fertile and why ?
3. What are " sandy-loam " and " silt " ? Where do you find them in Goa ?
4. What are the kinds of soil found in Goa ?
5. What is the importance of the coast of Goa ?

4. THE WATER OF GOA.

We have learned so far about the land of Goa; in this lesson we shall learn about its water. The vast store of water near this land is the Arabian Sea, which is a part of the Indian Ocean. The water of this Ocean is heated by the rays of the sun and is turned into steam or vapour. Vapour being lighter than the air rises up and is turned into

clouds high up in the cold air. The cold air brings the vapour together and makes it thicker or condensed. A cloud is nothing else but vapour condensed. The vapour is made thicker still when it is carried by the cold winds blowing from the sea to the land from June till October. These winds blow from the south-west over the land-mass of India and are known as the south-west monsoons. When they pass over Goa they are stopped by the cool heights of the hills and the mountains. They become thicker still and heavier, and now cannot float in the air. They come down in the form of rain. As the rain-water comes down the hills and the mountains it feeds our streams and rivers, thus flowing back into the sea. It also fills our wells, ponds, tanks and lakes. A part of it is again turned into vapour and clouds; a part is taken in by trees and plants through their roots and leaves; and the rest sinks into the ground to feed the springs of our wells and lakes, and our fountains. In this lesson we shall learn about the important fountains, lakes and rivers of Goa.

The Fountains of Goa : Owing to heavy rainfall, Goa is not wanting in fountains. There is hardly any "Concelho" which has not its fountains noted for their mineral waters. We may even say that Goa is a land of fountains. Lots of people flock to these for bath and picnic. Some of the fountains

are noted for their medicinal value, and as such their localities have been turned into health-resorts especially during Summer. The water of the fountains is also stored and used for crops in the dry season. Thus the fountains are of a very great use to this land. The following places are noted for their fountains and mineral waters:—

1. BARDEZ: Candolim, Quegdevelim (Reis Magos), Maina (near Betim), the Par River (Assonora), Ambexim (Assonora), Pomburpa, Xelpem (near Mapuçá), Cunchelim, Assagão, Ucassaim, Vaddem (Socorro), Oxel, Sinquerim, Gongo (Nachinola) and Serula.

2. ILHAS [Tissuari]: Chimbol, Panvelim, Neura, Mercês, Pangim and Cabo.

3. SALCETE: Margão, Consua, Raia & Chandor.

4. MORMUGAO: Quelossim and Cortalim.

5. PONDA: San Pedro, Querim, Cundaim, Vorgão, Velinga, Verem, Bandora and Shiroda.

6. SATARI: Caranzol, Bimbol, Dobasso.

7. SANGUEM: Rivona.

8. QUEPEM: Fatorpa.

7. PERNEM: Sarmolem and Mandrem.

The Lakes of Goa: There are very few lakes as such in Goa. They are not very large stores of water and occupy small areas. Being fed by springs they hardly get dry. Like the fountains they are

also used for irrigation, especially for the paddy crop. The most important lakes of Tissuari are at BANDVAL, CARAMBOLIM, CHIMBOL and PAINGUINIM.

MAYEM in the Concelho of Sanquelim, BENAULIM and CURTORIM in Salcete and CACORA in the Concelho of Quepem are also well-known for their lakes.

The Rivers of Goa : The most important rivers of Goa, as we move down from north to south are the TEREKHOL (15 miles), the CHAPORA (18 miles), the MANDOVI (38½ miles), the JUARI (39 miles), the SAL (15 miles) and the TALPONA (7 miles). All these rivers except the last two, which have local sources, rise on the slopes of the Western Ghats, are fed by their rainfall, and running with zig-zag courses westward finally join the Arabian Sea. They are fed by numberless streams and tributaries which form a network of waterways all over Goa, thus serving the purpose of trade. In many places in the interior they are used for irrigation. the Canal of Paroda in the district of Salcete is well-known in Goa. It is fed by a tributary of the Juari, called Kushavati.

Of all the rivers of Goa, the Mandovi and the Juari are the most important. They, with their tributaries, occupy nearly two-thirds of the territory. NOVA-GOA [Pangim], the capital of Goa and a good port, lies at the mouth of the Mandovi; and

MARMAGOA, a very fine harbour on the Western Coast of India, lies at the mouth of the Juari. CHAPORA, BETUL and TALPONA are the small ports at the mouths of the Chapora, the Sal and the Talpona respectively.

In the lower courses of the Mandovi and the Juari which are interconnected by the Canal of Cumbarjua, several rich islands are formed out of silt, brought down by the rivers and deposited at their mouths. Of these islands, TISSUARI (the Island of Goa) is the largest. This is formed by both the rivers, while the others viz. CHORÃO, DIVAR, CAPÃO, KHORJUVEM, CUMBARJUA, TOLTO and JUA are formed by the Mandovi alone.

The rivers of Goa, therefore, form its lands, enrich them, water them and provide excellent waterways for the country.

EXERCISES

1. How do we get our supply of water ?
2. How do we get rain ?
3. How do we use the fountains and lakes of Goa ?
4. Name any two fountains from Bardez and Salcete, and any two lakes from Ilhas.
5. What are the most important rivers of Goa and why are they so important ?
6. When does Goa get its rainfall ? Why does the rain come during those months ?

5. THE CLIMATE OF GOA.

So far we have learnt about the land and the water of Goa. The next thing we have to learn, is its state of air; because, like land and water, air too affects the life of man in a country as we have already seen.

The Seasons in Goa : The state of air of all the days during the year is not the same. We know that the days in March, April, May and even in the beginning of June are almost warm or hot in Goa. It is only when the showers of rain brought by the monsoons come pouring down by the tenth or the fifteenth of June, that we start feeling cooler and cooler. The rainfall lasts from June till October. Except October, when it is warm, during all these rainy months we feel generally cool and wet. This cool and wet part of the year, therefore, follows the hot and almost dry months of March, April and May. Then again we have the dry but cool or cold days of November, December, January and February. We thus find that all the days of the year in Goa fall into three parts according as we feel warm and dry, cool and wet, and cool and dry. These divisions of the year are called " Seasons ". Really we have only two seasons in Goa: the wet season and the dry one; but, to be more precise, we divide them into three. The warm and dry season is also

called summer; the cool and wet season is called the rainy season; and the cool and dry season is called winter.

How we feel Hot or Cold: It is the air heated by the rays of the sun more or less that makes us feel hot, warm, cool or cold. When it is heated more, we feel hot; when it is heated a little less, we feel warm; when heated still less, we feel cool and when heated least, we feel cold. The earth takes in the heat brought to it by the rays of the sun, and gives it back into the air; thus the air is heated. But throughout the year we do not receive the same heat from the rays of the sun. For nearly six months they are more direct and thus give more heat. For the next six months they get less and less direct, i. e. slanting, and thus give less heat. So the air too is heated more for some days, and less for the other days by the amount of heat given back by the earth. This amount of heat is called "Temperature". From March till June the rays of the sun get more and more direct. During these months the sun is almost overhead at noon. Hence the temperature of the air is high in summer and we feel warm. From June till October the sun is seen still overhead at noon and its rays are still direct. So these months also ought to have been warm. But the sky being covered with clouds and the rain being heavy, we do not feel so warm during

these months. The heat is reduced and we feel cool. The heavier the rain the cooler we feel in these days; but a day of sunshine in the middle raises the temperature again. We get very few showers of rain in October and this makes it a warm month like May. Thus we understand why our rainy season is cool on the whole. From November to March the rays of the sun are not so directly overhead, but a little to the south. This causes a great difference in the temperature of the air. It is very low and the days in winter are cold. In the hot season, the temperature of the air is higher than during the other seasons. Therefore, we feel warmer in summer than in the rainy season and winter.

How we feel Wet or Dry: Just as the air is made hot or warm, cool or cold by the "temperature" or amount of heat in the air, in the same way, it is made wet or dry by the amount of "moisture" or vapour, contained in it. We know well that the moisture is nothing else but water on the surface of the earth turned into vapour by the heat of the sun. During the rainy days the air contains more vapour, which is brought by the cold winds coming from the sea, and by the clouds that give us rain. A cloud, as we have seen, is nothing else but vapour condensed or brought together by cold air. During the rainy season, therefore, the days are more cloudy

and the air is more moist or wet than in the other seasons. So we feel wet during the rainy days and dry in the other days.

Weather and Climate: The state of air on a certain day or for a certain number of days, showing us how hot or cold, or wet or dry it is, is called " Weather ". During summer of the hot season we have days with warm and almost dry weather; during the rainy season we have days with cool and wet weather; and during winter or the cold season we have days with cool and dry weather. If we take into account, therefore, the weather of all the days of the year in Goa, we have more of warm and dry, or cool and dry days. This state of air of a place throughout the year, showing us its "temperature" and " moisture ", is called the " Climate " of the place.

The climate of Goa, as we have seen, is therefore neither hot nor cold; it is either warm or cool. Such a climate is called a mild or equable climate. It is also less wet and is, for this reason, a healthy one. The climate of Goa is thus very pleasant throughout the year.

What makes the climate of Goa such a mild, pleasant and healthy one ? We have already studied its situation. We know that it is a land near the sea, on the windward side of the Western Ghats. But for this situation, the climate of Goa

would have been very warm in summer and very cold in winter. But in summer, Goa gets the benefit of the cool winds blowing from the Arabian sea. This keeps the weather less hot during the hot season. In winter, in the same way, warm winds blow from the sea; and this keeps the weather in the cold season less cold or cool. During the rainy season the monsoons blow over Goa for nearly five months and bring with them innumerable clouds. These clouds when rising over the highlands and the thickly wooded cool heights of the Western Ghats bring us heavy rain and cool weather. This makes the New conquests cooler and damper than the Old conquests. The winds blowing over Goa throughout the year, and the clouds brought by the monsoons during the rainy season, are stopped by the mighty heights of the Western Ghats from going to the other side. This side has, therefore, extremes of heat and cold and more of dry days.

Goa is covered with thick "vegetation" i. e. plant life. It has also a network of rivers and streams and a light loamy soil. All these go a great way in making its climate cooler and pleasant. We know how cool we feel over forest areas, and in the shades of trees. Moist places too are cooler than dry barren lands. And places covered with a fine rich soil are for the same reason less affected by heat than sandy deserts and rocky lands.

In short, the situation of Goa in relation to the sea and the mountains, the winds blowing over it throughout the year, the water on its surface here and there, the rank vegetation and the rich loamy soil, all in their own way go to make its climate mild, equable and pleasant.

EXERCISES

1. What is the weather in summer and in winter in Goa? Why do we get such weather during these seasons?
2. How do you feel during the rainy days in Goa? What makes you feel so?
3. What is the climate of Goa? Why has it got such a climate?
4. Where shall we have more rain — in Sanguem or in Bardez? Explain the difference in rainfall.
5. How do you feel in summer on the sea-shore and in the areca-palm gardens and why do you feel so?

---

6. THE PRODUCTS OF GOA.

We have already seen that the land of a country i. e. its build, its air i. e. its weather and climate, and its water in the form of rainfall, rivers, fountains, lakes and sea, all these greatly affect the life of man in the country. Man cannot live without food; and so to get it he has to work. When he works he produces things. Different men produce different things. Some men live by cultivating the

soil, i. e. by agriculture. They produce different kinds of crops for themselves and for others. Just as crops are grown for food so also forests may be grown for timber and fuel. Then there are things which are made either by hand or with machines. They are finished articles made out of raw materials. Cloth is made out of raw cotton, wool, silk, etc. Boots, shoes and other leather articles are made out of hides and skins. Slates are made out of slate rock. Pots are made out of clay or metals such as silver, brass, copper, etc. We thus see that things may be grown or may be made. Then there are things which are found either on the land or in the earth or in the sea. The things which are dug out of the earth are called minerals. They are taken out of mines. Then there are birds and animals found in forests and on grasslands. Some of these, like elephants, are caught and tamed. Others, like cattle, sheep etc., are reared in large numbers. Besides these, there are many kinds of fish caught in the sea. They are found in water. So, the things produced by a country may be grown, may be made or may be found. All these things are called " Products " of a country

In this lesson we shall have to learn about the products of Goa, i. e. about the things grown, made or found in it.

(1) Things grown in Goa.

Rice or **paddy (Bhata)**: Goa is a land of villages. And most of the villages have their fields, surrounded by the houses of the villagers. These fields are used for the cultivation of paddy during the rainy season; and some of them are used both during the wet and the dry seasons. The crop grown during the rainy season is called "Kharip" or "Sard", and the one grown during the dry season is called "Rabi" or "Vaigan". The Kharip crop being grown during the rainy season does not require watering. The Rabi crop being grown in the dry season needs watering by irrigation.

The paddy plant requires a hot wet climate and an ample supply of water. It also needs a rich soil. The rich, soft, loamy soil of the fields and the valleys of Goa, and the ample water from the heavy rainfall, and from the tanks, lakes, ponds, etc. favours its growth. Hence, it is largely cultivated all over the country and is the staple food i. e. the chief food of the Goans. Nearly sixty to seventy per cent of the Goans are busy in the cultivation of paddy in their fields. They work on farms. They are farmers. Though rice is the main food of the Goans and its cultivation keeps them busy for the greater part of the year, still the crop of rice grown in Goa is not sufficient for them for the whole year. Hence, rice

is imported or brought into Goa from outside, especially from India and Burma. The Goa rice is only sufficient for six or eight months for the people of this country.

Though Goa cannot totally depend on herself in producing her staple food, still most of her people find their occupation in the cultivation of paddy at home. It is of great interest to note the different stages in this work. Just before the beginning of the monsoon the work of "tilling most of the fields is finished. With the beginning of the rains the real work of cultivation starts. First the soil that is made wet and soft by the rain is again "tilled" and "levelled". Then comes the "sowing" of the seed. After a few days, the rice plant comes out, and grows to a height of about one foot. Wives of the farmers are then busy in the fields removing the useless grasses from amidst the plants. This work is called "weeding". With the heavy rainfall the rice plant rapidly grows to a height of two to three feet. Then it does not require much rain. After some days the ears of paddy make their appearance. By the end of September, with the decrease of rainfall and the increase of sunshine the ears of paddy ripen. and are ready for the harvest. Then the "reaping" starts. From the time of sowing by the middle of June till the time of reaping by the end of September or the beginning

of October nearly hundred days are needed for paddy to ripen. Then the womenfolk are again kept busy in reaping the crop and collecting it into sheaves. The sheaves of paddy are then heaped in circles. The farmers then fix a day for "threshing" the corn with their feet or under the hoofs of bulls or by means of a machine. The corn that is separated from the grass is then "winnowed", i. e. given to the wind, to drive away chaff from the pure corn. Then the corn is measured and stored in barns or store-rooms. During the dry season the paddy is dried in the sun and then "husked" either by women with flails or by means of machines. When husk and bran are separated from rice it is ready for cooking purposes. Thus, for nearly five to six months of the year, the farmers are busy with the Kharip crop of paddy which is raised from nearly every field in a village.

After the harvest of the Kharip crop of rice comes the season of the Rabi crop. But now, all the fields are not taken under cultivation as is done in the case of the Kharip crop. This is because they cannot get a sufficient supply of water now, it being the dry season. Only some of them get the benefit of the water of tanks, lakes or ponds which are full after the monsoon. From the tanks water is spread over the fields by means of irrigation, and the Rabi crop is raised during the next

five months of the year—from November to March. Thus the cultivation of paddy forms the main occupation of Goan villagers during the year.

Other Cereals, Pulses and Oil-seeds: There are corns which grow in the form of grass. They are called "cereals". Rice, wheat, millets are cereals. There is another kind of corn which grows in the form of bush. It is called "pulse". Its grain can be divided into two parts. Gram, peas, beans are pulses. Besides rice the other cereals grown in Goa are millets. They are of different kinds. But they are all round grains. They have different country names, such as Nachne, Vari, Pakad, etc. They are also grown abundantly in Goa. But they do not require such a fine and rich soil nor such an abundant supply of water as rice does. They are best grown on the slopes of low hills at the close of the monsoon and hence do not stand in need of much water. A moderate supply is quite sufficient for them. These cereals make an important food for the poorer classes who eat them in the form of pudding, cakes or gruel. The hilly tracts of Pernem, Sanquelim and Satari mostly produce these crops.

Besides the cereals other crops grown in Goa are the different kinds of pulses. They are mostly beans of different kinds the commonest of them being "alsando". The other pulses largely grown are "udidh" and "kulita". They are also used

for making cakes and gruel. Besides these, there are oil-seeds such as sesamum or "til", linseed or "sanbiyam". From sesamum oil is pressed out, and the oil-cake is used as a fodder for cattle. Linseed is grown in Goa mostly for the fibre of its plant, which is used in making ropes and strings. These crops too do not require a fine rich soil and a great supply of water. They too are grown in the hilly tracts of Goa. Only the bean (alsando) needs a rich soil. It is mostly grown in Bardez.

EXERCISES

1. What are "Cereals" and what are "Pulses"? Name the cereals and pulses grown in Goa.
2. Describe briefly how a Goan farmer grows paddy in his field.
3. What kinds of soil and climate are needed for paddy and other cereals? At what time are they mostly grown in Goa?

7. THE PRODUCTS OF GOA (*Continued*)

Garden Crops: After the Kharip harvest of paddy, the villagers are again busy in many of the fields, in growing crops called garden crops. They are grown in gardens, which are surrounded by mud walls. The crops are watered by wells, which do not go deep in the fields. They supply sufficient water during the dry season. This is the water of the monsoon that feeds the springs of the wells.

The garden crops are onions, chillies, water-melons, sweet potatoes, sugarcane, plantains, garlic, turmeric, tomatoes, beans, brinjals, lady-fingers, radishes, cabbages and other kinds of vegetable. These crops do not need much watering and hence are grown best from December till May. They are watered by drawing water from the wells in earthen pots or by means of irrigation. What these crops require is rich, soft soil and good manure. The manure is mostly country-made and generally consists of the dung of cows and pigs, of ashes and of decayed fish. At present foreign manure is also used.

Before these crops are grown, the gardens are turned into small square plots with the soil well tilled and levelled. These crops do not need daily watering. They may be watered even on every alternate day. The harvest time of these crops generally falls in the month of April. The cultivation of garden crops forms the main occupation and a means of livelihood of the villagers during the dry season. The most important of these crops are onions and chillies. They are sold in April and May on bazaar-days, and make an important provision for the Goans till the next season. Most of these crops are grown in the lowlands of Pernem, Bardez, Ilhas, Salcete, Quepem and Canácona.

Of the crops grown in the gardens of Goa two are noteworthy—the bananas of Moira and the sugarcane. Moira is a village in Bardez situated at a distance of three miles from Mapuça and is well known all over Goa and outside for its banana gardens. These are grown at the foot of hills in Moira. They make a special occupation for the people of the village. The banana trees are planted in long rows and need a good manure and ample water. During the dry season watering is done by means of irrigation from wells, while during the rainy season a natural supply of water is available. This is the time when the trees being in full growth need ample water. By this time bunches of bananas are up, which get ripe in August and September. This is generally the harvest-time; and the bunches are brought for sale in Mapuça. The bananas are twice or thrice the size of the ordinary plantains and are more tasty and sustaining.

Just like the gardens of banana trees in Moira there are also sugarcane gardens grown in fields in many parts of Goa. Saligão in Bardez was once famous for its sugarcane plantations; but now they are not grown there on a very large scale. The sugarcane is grown in Goa largely in the New Conquests. Here an abundant supply of water from rivulets and tanks is available. Sugarcane

was once largely used in Goa for making jaggery, but owing to the cheap import of sugar from Mozambique, Java, Mauritius and India, the industry has not been so very prosperous. Yet of late attempts have been made to protect it. The sugarcane grown in Goa is now mostly used for chewing and for extracting juice either for jaggery or for wine. Like the banana gardens of Moira, sugarcane gardens too require a rich soil, ample water and good manure.

Just like the garden crops of the dry season, there are garden crops of the wet season. They are grown during the monsoon and mostly consist of vegetables of different kinds. They thrive well even in harder soils at the foot of hills with the natural supply of water from rain. The islands of Jua and Cumbarjua are well known for these crops. Lady-fingers, cucumber, beans, turmeric, pumpkins, yams, ginger, chillies, gherkins, ridge-gourds, snake-gourds, vegetable marrow and different kinds of spinach are the important garden crops of the season.

Certain garden crops are grown in certain places only. The following crops and the parts of Goa where they are grown should be noted.

Onions

1. Pernem —On the bank of the Tiracol.
2. Bardez—Moira, Aldona and Sangolda.
3. Ilhas—Jua.

Chillies

1. Pernem — Mandrem, Morjim, Arambol, Corgão and Tamboxem.
2. Bardez — Calvi, Khorjuvem and Kitla.
3. Ilhas — Jua.
4. Salcete — Cuncolim.
5. Quepem — Balli.
6. Canácona — Cola (Khol).

Brinjals

1. Ilhas (Tissuari) — Taleigão, Agassaim.

Radishes

1. Ilhas (Tissuari) — Agassaim, Jua.

Sweet-potatoes

1. Bardez — Saligão.
2. Ilhas (Tissuari) — Taleigão and Agassaim.
3. Salcete — Majordá.

Beans (alsando)

1. Bardez — Saligão, Sangolda.

Water-melons

1. Bardez — Parrá, Nerul.
2. Ilhas (Tissuari) — Mercês.
3. Salcete — Majordá.

Lady-fingers, Cucumber, Ridge-gourds, etc.

1. Ilhas — Jua, Cumbarjua.
2. Salcete — In the neighbourhood of Margão.

Sugarcane

1. Sanguem- Curdi, Collem, Rivona, Colomba.

Yams, Spiny-potatoes, etc.

1. Satari—Querim.
2. Sanquelim—Sanquelim.
3. Sanguem—Quirlapale, Cormonem.
4. Bardez—Moira.

Betelnuts

Besides the gardens grown in the dry season, there are other types of gardens in the interior of Goa. They are the gardens of Areca Palms. The palm grows straight like a cocoanut tree, but is slender in trunk with its leaves at the top in the form of an umbrella. The fruit of the tree growing in bunches is called areca nut or betelnut. These palms require a cool, damp climate of hill-slopes and valleys and an ample supply of water throughout the year. During the rainy season they get an abundant supply of water; but during the dry season, they need constant watering by irrigation, which can be easily done from the mountain streams and tanks in the interior of Goa. Hence, in most parts of the New Conquests, these gardens are grown in valleys. The concelhos of Sanquelim, Ponda, Sanguem, Quepem and Canacona have most of these gardens. Side by side with the palm grows also the betel vine the leaves of which are used for chewing with pieces of

betelnut or " supari ". This is called " pan-supari " or " vida " or " tambul ". It is specially eaten after meals by the Hindus to sweeten the breath and help the digestion. Betel vines are made to climb over areca palms.

Like the betel vine, there is another creeper which is also grown on areca palms. Its fruit is called pepper. Pepper is a kind of spice used in cookery. In Konkani it is called " mirim ". It grows in small, long, slender bunches, and is used also for pickles when it is raw.

In the gardens of areca palms many kinds of fruits, such as jack-fruits, mangoes, plantains, apples, pine-apples, limes, pomelows, cocum, etc. are also grown. We shall learn about these in detail when we come to learn about the fruits of Goa. Areca nuts are a good source of income to the Goan gardeners in the New Conquests. They are not only used in Goa, but are also taken for sale outside. Another source of income from the gardens is cocum which is also exported to other parts of India in large quantities.

EXERCISES

1. What kinds of gardens do you find in Goa ? What are the crops of these gardens ?
2. How will you make a garden in your field ? What kind of manure will you use for the garden ?
3. In what parts of Goa are areca palms grown ? Why are they grown in these parts ?

4. For what purposes do you use some of the most important garden crops of Goa ?

8. THE PRODUCTS OF GOA *(Contd.)*

Cocoanuts: We have not to go far to see a cocoanut tree. It is seen everywhere in Goa. Next to rice, it is of great importance to us. We can hardly find a village which has not its cocoanut plantations. In the midst of these trees the villagers have their huts and houses. Not a single part of this tree is without its use. The fruit serves as an important article of food. When raw, its water is used as a delicious and health-giving drink. When ripe, the kernel is used for curry, for preparing other dishes and different kinds of sweets. The kernel when dried, is called "copra"; and out of it oil is extracted in the country mills called "ghane". The oil is used in Indian cookery instead of ghee, just as the raw cocoanut juice is used to serve the purpose of milk. It is also used in soap-making and for medicinal and other purposes.

Like kernel, the other parts of the fruit are also put to important use. Shells are turned into ladles and also made into buttons. When burnt, they make a very nice fuel, and also give a fine coal which is used by goldsmiths in their work, and by washermen in ironing clothes.

The outer shell called "husk" (*sodon*) is turned into "coir", and out of this ropes, strings, carpets, etc. are made. The husks also serve the purpose of fuel.

If we look to the other parts of the tree, we shall see that out of the leaf sticks brooms are made; out of the trunk, beams and rafters are made; and the leaves are used for the purpose of thatching roofs and making huts.

This tree yields also a nice juicy substance called "toddy". When fresh it is called "niro". It is a very delicious and healthy drink. But when fermented it is turned into an intoxicating drink, which is distilled into a kind of liquor called "phenim". Goan labourers are fond of this drink; but it is very harmful. Phenim may serve the purpose of spirits in burning. It is also used for medicinal purpose. Out of toddy a very fine type of jaggery is also made, and sold in market in the form of pyramids.

The cocoanut palm being so very useful in Goa is considered by the villagers as "kalpataru" or the tree that is a giver of desires. It is not only useful but also adds to the beauty of the land. It grows in rich groves along the coastal plains of India. It needs a fine, rich soil and a warm, damp climate. The warm climate and the sandy soil of the sea-coast suit it best.

Like betelnuts, cocoanuts too are sent outside for sale in large numbers. They are, therefore, a great source of income.

Cashew nuts or **Caju nuts** : This is a third kind of nut besides the cocoanut and the betelnut, which is a great product of Goa. It is a nut which grows with the caju fruit. This is the fruit of the caju tree, which grows widely on the hills all over Goa. The leaves of this tree serve the purpose of fuel for Goan villagers. The fruit is of two kinds, the red one and the yellow one, and is delicious enough for eating. But it is specially used in Goa for making a kind of liquor. This liquor, called "cajel", is brewed in the days of caju harvest, on hillsides in the stills, which are supervised by the Government. This liquor is stronger than the one known as "urraq" in Konkani.

"Urraq" is brewed out of caju juice, and "Cajel" is brewed out of "urraq". There is still a third brew, the strongest of the three, known as "caju phenim". It is of great medicinal value, especially for cholera and diarrhoea. "Urraq" is mostly used by poorer classes. In brewing, all these liquors pass through the same process that is used in the case of toddy or cocoanut-palm liquors. The caju season begins in February and lasts till May. It continues nearly for four months.

The seeds of the caju fruit are collected during the harvest time in large quantities, and sold by the villagers to the wholesale dealers, who either roast and break them in the factories, or send them out in bags to other parts of India or to foreign lands. There are many caju nut factories in Goa. Of these, those at Bicholim and Saquelim and the one at Cumbarjua are well known. In these factories the seeds are roasted and broken and the kernel is selected, packed in boxes and sent out to Europe and America. The kernel is very tasty and serves as dessert. The raw seeds that are exported are also used for extracting oil which is of great medicinal value in leprosy. The seeds when roasted yield an oily substance which is used for axles of carts and for coating boats and big vessels.

The caju harvest and caju nut factories give ample work to Goan villagers. During the harvest people are busy in collecting fruit and nuts and in working the liquor stills. In the factories men, women and children find much of their work.

Fruits and Flowers: There are different kinds of fruit trees and fruit plants grown in Goa, but they are not grown on special farms. They are grown all mixed. For example, mango trees and jack-fruit trees are grown side by side with cocoanut palms or areca palms. But almost all flowering trees

GOA
PRODUCTS

and plants are grown in large or small gardens surrounding the houses of Goan villagers.

Of the fruit trees, we have already learnt about cocoanut palms, areca palms and caju trees, and also about their fruits which are mostly nuts, viz., cocoanuts, betelnuts and caju-nuts. So it is needless to repeat them here. The next very important fruit produced in Goa is the mango. It has a good many varieties. These are grown by grafting i. e. by fixing a branch of one mango tree on another one with the fine mud of ant-hills.

The Goa mangoes are the most delicious of Indian fruits, and have a great demand in Bombay markets and elsewhere. A good many of them are exported nowadays to Europe. The mango season comes generally in April and May, though some of the varieties are seen in June also. Of all these, the best ones are the "Afonso" and the "Malcurada". They have an excellent taste and flavour of their own, and are in great demand everywhere. The other important varieties are "Xavier", "Fernandina", "Colaço", "Malguesa" "Costa", "Pairi" and "Monserrate". The Mango harvest in Goa begins with Malcurada and ends with Fernandina. All these varieties have their peculiar shape, size, flavour, colour and taste, but all of them are delicious.

Mango is not only eaten when it is ripe, but is also preserved in tins for export. It is also turned into sweets. Besides the above-mentioned, there is a small variety of raw mangoes which is specially used for pickles, and is sold in every market just in the beginning of the season. The mango is a great source of income to Goan landlords, or " bhatcars". It is next in importance to the cocoanut or the betelnut.

Then we have the jack-fruit the two varieties of which are grown everywhere in Goa. They have their own names " kapo " and " rasal ". The juicy pulp of the latter is spread in thin layers on leaves and is dried in the sun. It is known as "phanaspoli " or " satha ". The juicy pulp of mangoes also serves this purpose.

The fruits of importance grown in Goa gardens are guavas, papayas, pine-apples, custard-apples, plantains of all varieties, pomelows, limes, plums, chickoos and bread-fruit.

Flowering plants of all varieties are grown in every garden. They are too numerous to be mentioned here, but a few such as roses of all kinds, daisies, buttercups, jasmins, zui, zai, mogra, champa, lilies, pansies, dahlias and beautiful creepers of several kinds deserve special mention.

Forests : Goa is not wanting in its forest trees. They abound in the territories of New Conquests. The forests extend thickly from the slopes of the Western Ghats and spread all over the interior of Goa in the districts of Pernem, Satari, Sanquelim, Ponda, Sanguem, Quepem and Canacona. The heavy rainfall, brought by the south-west monsoons and blocked by the walls of the Ghats, makes the growth of the forests dense and rapid. If the forests are properly preserved, they will be a great source of income. The forest trees are used for timber and fuel. The timber is used for beams, rafters, masts, ploughs, sleepers and for all kinds of articles of furniture. Goa forests are full of different kinds of trees, the following of which deserve special mention. Their konkani names are : Panas (Jack-fruit tree), Ambo (mango tree), Chinch (tamarind tree), Jambul, Zambo, Marta, Saylo (teak); Sisso, Babul, Hed, Siras, Pat-panas, Cumbyo, Vodd, Pimpal, Champho, Mirio, Bhendi, Sanvor, Ont, Nano and Bamboo. The last one is used for making mats, baskets, etc., and for huts. In the interior of Goa, specially, forest trees such as teak, bamboo, etc. are planted and preserved.

EXERCISES

1. What kinds of nuts are grown in Goa? Where are they grown and for what reasons?

2. Draw a picture of cocoanut palm and of an areca palm.
3. What are the different things you get out of a cocoanut tree and for what purposes do you use them ?
4. What are the different kinds of fruits grown in Goa ?
5. What are the liquors made in Goa and how are they made ? For what good purposes can you use them ?
6. What is "timber" ? Name some of the timber trees grown in Goa.

9. THE PRODUCTS OF GOA (*Contd.*)

(2) Things found in Goa.

So far we have seen the things grown in Goa. Now we have to see those found in this country. They may be found in the earth or on the land or in the sea. The things found in the earth are to be dug out or mined, and are called "minerals". The most common mineral in Goa is the red solid rock which is cut out of the quarries or stone-pits into small blocks of stones, and these are mostly used for building purposes. Such quarries are found in every part of Goa. The rock is found in layers below the soil and is known as "laterite".

The other rock found in big blocks is the black rock or the Deccan Trap. It is mostly found in the eastern parts of Goa near the Ghats. In many parts of Goa clay is found in layers just below the

soil, which is mostly used in making earthen pots, tiles, etc. Slate is found in some parts of Ponda.

Goa abounds in many kinds of minerals most of which are unfortunately not mined. Of these, manganese, iron, aluminium and mica are the most important. Manganese is mostly found in large quantities in the concelho of Sanquelim and Sanguem and is exported to Europe. Iron is found in Pernem, Satari and Sanguem.

Besides things found in the earth, there are animals which are found on land. Some of these are tamed and reared, while others, found in the forests are often hunted. The animals tamed in Goa are mostly cattle, goats and pigs and fowls. There are different kinds of beasts and birds which abound in the forests of Goa. Of these, wild boars, antelopes, leopards, rabbits, etc., are hunted for game and the flesh of most of them is eaten. The goat is kept either for milk or flesh. Bulls and he-buffaloes are used for drawing carts and ploughing fields; and cows and she-buffaloes are kept for milk. The flesh of cattle is called "beef" and that of pigs is called "pork". It is mostly used as an article of food by the Christians. Fowls, like cocks, hens and ducks, are kept specially for their tasty flesh. Hens yield an abundance of eggs, which are widely used by all classes. But unfortunately, Goa has neither poultry farms nor dairy farms.

Many kinds of fish are caught all along the sea-coasts of Goa and in the rivers. Fish mostly abound in shallow waters and they are caught in big nets in large quantities from September to May. During the monsoon the fishing work is made almost impossible in the stormy seas. The rivers of Goa yield plenty of fish, which is more tasty than even the sea-fish.

Fish is an important article of food in Goa, side by side with rice, curry and vegetables; and hence it is an article of daily sale in the markets. Much of the fish is salted and dried, and is also used as a manure for crops. The fish that is salted is sold in the country and is also exported. Fishing is thus an important occupation of a large number of the Goans living on the coastland as well as on the river banks.

Things made in Goa.

In learning about the products of Goa we have seen so far the things grown and found. We shall now see some of the articles made out of these by the people of this land. The articles are made by hand; hence they are called "manufactures." They are made by a great many people on a large scale.

Earthenware: The commonest things made in almost all the districts of Goa are the articles of clay and fine earth. They are also called "earthen-

ware". Clay is soft and sticky, and, when mixed with fine earth, can be easily turned into pots and other articles, mostly used for household purpose. Both the place where pots are made, and the art of making them are called "potteries". A potter first prepares the earth by mixing well clay and fine powdered red earth. A lump of the earth is then placed at the centre of a revolving wheel, and shaped into different kinds of pots. This wheel is known as the "Potter's Wheel". The pots are then beaten, dried in the sun and nicely plastered. Sometimes different kinds of designs are drawn on them. All these pots are then baked in a big furnace, and are then ready for sale. Potteries work well in a place where clay is found in abundance. Pots are made all over Goa, but those made in the concelho of Sanquelim are famous for their make. The tiles commonly used for the houses in Goa are made in the country. They are also made of clay and powdered earth.

Coir-rope, ladles and brooms, and cocoanut oil: All these things are got in places where there is a wide growth of cocoanut palms and a large produce of cocoanuts. They are mostly made on the coastlands. Cocoanut-husks are first left in water to decay. Then they are taken out and beaten into fibre. This fibre is called "coir". Ropes and strings are made by properly twisting coir. Ladles are made out of polished cocoanut shells by

fixing small bamboo sticks into their holes. Brooms are made out of the sticks of palm-leaves by stringing and then folding them together. Oil is extracted from copra in the oil mills. The oil cake is used as fodder for cattle.

Articles made by the different classes of Artisans: Such articles are copperware, sundry iron and steel goods, gold and silver ornaments, furniture and other wooden articles, mats, baskets etc. Copperware and copper goods are made by coppersmiths out of copper plates bought from outside. These goods are mostly manufactured in towns like Mapuça, Margão and Bicholim, and are sold all over Goa at big fairs and public festivals. The artisans who make copper goods are called coppersmiths. Goldsmiths make fine gold and silver ornaments all over Goa, which are famous for their make even outside. Blacksmiths make things of iron and steel. Carpenters make different kinds of furniture, toys, etc. Tailors make clothes and dresses and shoemakers make shoes and sandals. Basket-makers make mats and baskets out of bamboos and reeds. Weavers spin yarn and work handlooms.

In the parts of Goa lying near the sea, sea water is stored and dried up in the sun during summer and thus salt is made. These places are called salt-pans, or "mithagar". Salt prepared in this way is exported in large quantities. Agarvado in the concelho of Pernem, Arpora

and Nerul in Bardez, Ribandar, Santana, Curca and Agassaim in Tissuari, and the places on the banks of the Sal in Salcete are well known for their salt-pans.

All these things are articles of daily use, and require special skill. Hence they are made by certain classes of people only.

Liquor: We have already seen how this is produced in Goa out of cocoanut palm, caju and sugar-cane. It is distilled in almost all the districts and a great many people of this land find employment in its manufacture and sale.

The manufactures of Goa are mostly home-made goods. They are made mostly at home and not in factories. Hence they can be called "cottage-manufactures." They are mostly articles of inland trade and rarely find access to foreign lands. Recently some factories have been opened in Goa for the manufacture of tiles, matches, soap, candles, ropes and carpets, and for extracting oil, grinding corn and husking rice.

EXERCISES

1. Of what is your house built? From where do you get the material for building?
2. What is a mineral? Where is manganese mined in Goa?
3. How do you get salt in Goa and in what places do you get it?
4. Describe how pots are made in Goa. Draw a picture of a potter's wheel.

10. THE OCCUPATIONS OF THE GOANS

When we learnt about the products of Goa, we saw how the Goans find their work at home. The land in Goa being rich, and there being an abundant supply of water, the majority of people work on it in growing different kinds of crops. This makes the people either farmers or gardeners. Then there are people who live by different kinds of skilful arts. They are artisans, such as masons, carpenters, tailors, potters, goldsmiths, blacksmiths, coppersmiths, shoemakers, etc. They are busy with their work noted for its make and beauty all over Goa and even outside. Then, there are the industries connected with bamboo, coir, brooms, etc. They give work to a large number of Goans.

A good number of Goans are also busy in trading and shopkeeping. These are the merchants and shopkeepers in the towns and villages of Goa. They provide us with all kinds of goods so very useful to us in our daily life, such as grain, sugar, ghee, oil, tea, coffee, cloth, candles, matches, petroleum, paper, pencils, pens, ink, ribbons, laces, etc. These things are brought by rich merchants in large quantities from Bombay and other parts of India or from foreign lands and then sold to small merchants. These in turn sell them in small quantities to the people. The dealers in large quantities are called " wholesale dealers " and those who sell in small quantities are called " retail dealers ".

The farmers, the merchants and the artisans are greatly helped in their work by the two classes of men—the cartmen and the boatmen. They carry goods from one place to another in their carts and boats.

A good many Goans also work in the Government service as officers, clerks, soldiers, teachers, workmen, etc. They are called "Government Servants". Others work in private concerns such as schools, companies, factories, shops, etc. They are teachers, clerks, workmen, etc. Besides these there are others like lawyers, doctors, etc., who belong to independent professions. A good many Goans are also artists and musicians.

Another occupation worth mentioning is fishing; and it provides work for a number of Goans living on the coastland and river banks. The fishermen catch fish in big as well as small nets, and send them for sale with their wives and chidren. The fish caught in the sea is also salted and dried. A large quantity is also preserved for manure. All this gives work to the fishermen as well as their wives and children. The manufacture of salt provides for a class of Goans, who mostly live on the coastland. In the interior of Goa, lumbering or wood-cutting gives work to many people. In some parts people find work in the manufacture of tiles and lime (chunam).

A large number of Goans go out to earn their living in different parts of the world. The people who thus go out of their country are called "emigrants". Goa cannot provide for all its people. Hence some of them are forced to emigrate. They go out to find jobs and thus earn money for themselves and their families which are mostly left at home. The emigrant population of Goa numbers over a lakh. Most of this population consists of Christians. They are spread all over the world in India, Burma, Africa, Persia, Mesopotamia etc.

EXERCISES

1. What are the occupations of the people of your village ?
2. Who is ' wholesale dealer ' ? Where do fishermen live in Goa ?
3. Why do people of Goa emigrate ? In which parts of the world do you find them ?

11. THE POPULATION OF GOA

We have already seen that Bardez, Ilhas and Salcete are the lowlands of Goa; they are more fertile than the rest of the districts. Hence, more people live in these parts than in the others. As a rule the population gets thinner and thinner as we go

from the coastland into the inner parts of Goa, these being mostly hilly and covered with forests. A greater number of Goans live by cultivating the land. It is richer in Ilhas, Bardez and Salcete and in the rest of the coastland, than in the interior. It is for this reason that these parts of Goa are more thickly populated than those in the interior.

There is another reason why the population of Goa gets less and less as we go into the interior. As we go inside the climate of Goa gets damper or wetter owing to the hilly tracts of land covered with forests. This is specially the case during the monsoon which lasts for nearly five months in Goa. In some of the parts of the interior the climate is also one of extremes, i. e., very hot in summer and very cold in winter. This is specially the case in the rocky, barren parts of the country. Just as people require good soil and sufficient supply of water for crops and other purposes, so they need good climate to lead a healthy life. More people live in countries having a drier climate than a damper one. Lands which are either hot and moist or cold and moist do not help people to live a healthy life. Such lands generally breed fever. So, it is not difficult to understand why Satari, Sanguem, Quepem and Canacona are thinly peopled.

Religion: We have seen which parts of Goa are thickly peopled and which are thinly peopled.

Let us now see the religion of the people. The people of Goa number about six lakhs. Of these a little more than half are Hindus; less than half are Catholics; and the Mahomedans number about six thousand. Majority of the Christians live in the Old Conquests and a large number of the Hindus, in the New Conquests. Previous to the conquest of Goa by the Portuguese, the people were mostly Hindus; but after the conquest, majority of the Hindus of the Old Conquests were converted to Christianity. The Mahomedans are to be found chiefly in Nova Goa, Margão, Mapuça, Ponda, Bicholim, Valpoi and Sanguem.

EXERCISES

1. Where do people live ? In which parts of Goa do you find more people and why ?
2. Which parts of Goa are thinly peopled and why ?
3. Where do you find a greater number of Christians in Goa and why ?

12. LANGUAGE AND EDUCATION OF THE GOANS

A language is used in speech and writing. It is used to express what a person thinks and feels. Sometimes a language may have different forms for speech and writing. What is the language commonly spoken by the Goans ? It is Konkani.

It is the language mostly used by the people of the Konkan in their speech. The part of the western coastal plain of India extending from Bombay to Mangalore, is commonly called the Konkan; but Konkani, as such, is not spoken in the whole of the Konkan. It is spoken more in the southern half i. e. from Ratnagiri to Mangalore. In the northern half mostly Marathi is spoken. Konkani is considered by some as a dialect of Marathi; while some are of opinion that it is derived from Sanskrit, from which Marathi also finds its origin. Whatever be the case, Konkani is used almost as a language of speech, while Marathi is used for writing. Yet of recently attempts are being made specially by the Christians to use Konkani for writing.

Though the Goans speak Konkani, the tone of the language is not the same in all the districts. The Konkani spoken in the northern part of Goa is closer to that spoken in Vengurla and Sawantwadi, while the Konkani spoken in the southern part is closer to that spoken in Karwar and Mangalore. Thus pure Goan Konkani is almost limited to the districts which lie in the middle of the country. They are Bardez, Ilhas, Salcete, Ponda, Sanguem and Quepem. If we study most of the words of this Konkani, we will find that they have their origin in Sanskrit. But at present we find a

good many words from Kanarese, Portuguese and English used in Konkani. This is due largely to the influence of these languages in the past and present times on Konkani.

Though Konkani is almost the language of speech and is widely used, still the languages generally studied in the country are Marathi, English and Portuguese. Marathi is specially studied by the Hindus. They also write books in this language and use it for keeping correspondence and accounts. Portuguese is mostly learnt as the Government language, while English is studied because it enables the Goans to earn their living in any part of the world. All these languages are also studied for the sake of knowledge and learning. Marathi and English are mostly learnt in private or public schools, while Portuguese is the only language for the study of which special Government schools are established. But there are also a few Government Portuguese-Marathi schools in the New Conquests specially meant for the Hindus.

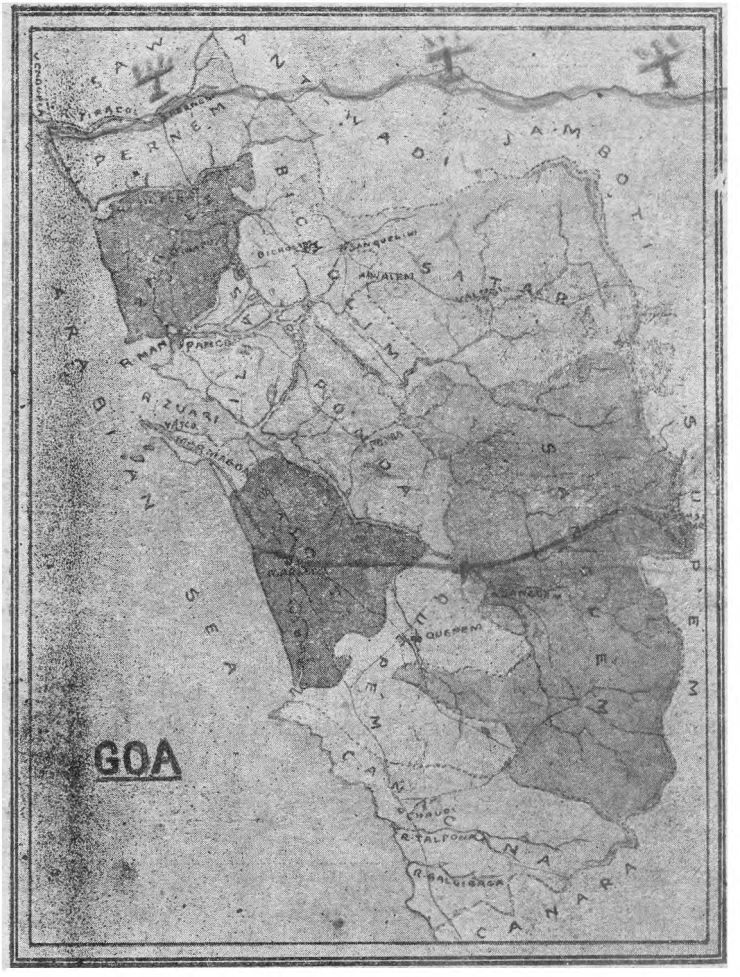
There are at present nearly two hundred Marathi schools in Goa mostly conducted by the Hindus and here Marathi education till the fourth standard is generally given. It is a primary education. The sacrifice made by the Hindus for keeping the study of the language continued in Goa from a very old time, is noteworthy.

The English language is studied in the high schools specially in Bardez, Ilhas and Salcete. Most of the high schools prepare students for the Matriculation examination, and are recognized by the University of Bombay. They are well known in Goa and also outside. Besides these high schools there are many primary schools all over Bardez, Ilhas and Salcete, where English is taught up to the fifth or sixth standard. The number of students going for the study of English has now greatly increased. They are mostly the children of the middle class Goans living in the country and outside. The poorer class of Goans is mostly illiterate, education being within the reach of the wealthy and middle class.

Marathi is scarcely used in Goa as a language of speech; but Portuguese is spoken in Government circles and in many Christian families. English is specially spoken in the families of the emigrants who have returned home. The majority of Goans use Konkani as their language of speech. The Mahomedans in Goa generally speak their own language which is a dialect of Hindustani.

EXERCISES

1. What are the languages spoken in Goa and what are the languages used in writing ?
2. Why is English learnt in Goa and where is it taught ?



In this map read SANQUELIM for BICHOLIM.

3. How is Marathi taught in Goa? By whom is the language mostly studied?

13. THE TRAVEL AND TRANSPORT IN GOA

People like to go from one place to another for business or for seeing things. This going and coming back from one place to another is called "travelling". Men can travel by land, by water and by air. The means we use in travelling are vehicles and ways or routes. Landways are roads and railways; waterways are rivers and seas, and the ways through the air are the airways.

We can travel on roads on horse-back, or in carts, garries and motor-cars, or on motor-cycles and bicycles; we travel on railways in trains. We sail on rivers and seas in boats, ships and steam-ships or ocean liners; and we travel in the air by aeroplanes. Formerly men used to walk when going from one place to another, but now vehicles have made travelling easy and quick. The old vehicles on land are carts drawn by bulls, and garries drawn by horses; and those on water are boats and ships with sails. Small boats are driven by men with oars. Rivers are also easily crossed over by bridges and thus travelling on land is made quicker.

Motor-cars, bicycles, railway trains, steamboats, steamships and aeroplanes are the new modes of travelling. With these vehicles we can travel much more easily and quickly than by the old ones. The old vehicles as well as the new ones are used also for the purpose of carrying goods from one place to another, i. e., for "transport". Nowadays we can send our goods very quickly to any part of the world by means of motor-buses, railway trains, steamships and aeroplanes. In olden times men used to carry goods on their backs, or they used to send them on the back of animals such as bulls, horses, mules, camels, etc. They also used to carry them in carts or in boats. But the old means of transport take much of our time and energy. The new means of travel and transport, on the other hand, save our time and energy.

Travelling and transport of goods in Goa are mostly done on land and on water. Thus we have only landways and waterways.

The landways in Goa: The most important landways in Goa are roads. Almost all the villages are connected with the towns by roads; and there are now regular motor services between them. So, now there is hardly any part of Goa which cannot be reached by road. There are three centres of motor service in Goa. They are the chief towns of the Old Conquests, viz., Mapuça, Pangim and Margão.

From these centres you can go by a motor-car or motor-bus to any part of Goa or outside. These three centres stand on the main Government road which passes through Goa from north to south, joining Naibag on the northern border to Polem on the southern border. This road passes through the concelhos of Pernem, Bardez, Ilhas, Salcete, Quepem and Canacona, being cut off by the great rivers the Chapora, the Mandovi and the Juari, at Colvale, Betim and Agassaim respectively. Thus we can now travel in a motor-car right from the north of Goa to the south taking the car with us across the rivers in ferry boats working regularly at Colvale, Betim and Agassaim. In Canacona we can take our own car as far as the river Talpona, after which we have to hire a car or a bus.

In order to get a clear idea of the travel from the north of Goa to the south, we may just describe it. We may start in a motor-car at Naibag, situated on the bank of the river Tiracol and come to Pernem, the chief town of the concelho of Pernem. From Pernem the car takes us to Macazan on the northern bank of the river Chapora. We cross the river in a boat or a ferry boat, and reach the other bank at Colvale. At Colvale we get motor-cars or buses taking us to Mapuça, the chief town of Bardez. From Mapuça we can again catch a motor-car or a bus at the big motor-stand, which takes us to

Betim. At Betim we cross the Mandovi in a steam-launch or a ferry boat and come to Panjim, the beautiful capital of Goa, situated on the southern bank of the Mandovi. So far we have passed through the concelhos of Pernem and Bardez; now after getting a motor-car or a motor-bus at Panjim we pass through Ilhas, and come to Agassaim on the northern bank of the Juari. We cross the river in a ferry boat and come to Cortalim in the concelho of Mormugão. At Cortalim we get cars going to Margão, the chief town of Salcete. At Margão we get motor-buses going to Canacona. From Canacona we can go to Polem in motor-cars after crossing the river Talpona and Galjibaga in ferry boats.

Besides this main road we have other roads going eastward and south-eastward from it to the concelhos of Sanquelim, Satari, Ponda, Sanguem and Quepem. They start from Mapuça, Panjim and Margão, which all lie on the main road. Some of the following roads should be noted: (1) **Mapuça to Sanquirval** — We can go from Mapuça in a motor-car, parting at Cuchelim on the main road going to Colvale. On the way we pass through the villages, Tivim and Asnora. At Asnora a road takes us up eastward passing through the villages of Nanora, Casarpal and Dodomaroga, to the eastern border of Goa. (2) **Mapuça to Quelghat** — The road going from Mapuça to Asnora takes a turn south-eastward

at Asnora. From here a new road leads us to Bicholim, Sanquelim, Valpoi as far as Quelghat in the Western Ghats, on the eastern border of Goa. (3) **Mapuça to Ponda** — The road leading from Mapuça to Valpoi gives us a new branch after a few miles from Sanquelim just near Onda and takes a turn south-eastward passing over Surla, Palli as far as Usgão. Here it crosses the new bridge, built over the branch of the Mandovi and leads us to the big road going to Ponda. (4) **Durbhat to Colem and Tinaighat** — This road starts from Durbhat on the bank of the Juari in the concelho of Ponda and takes us to Ponda, the chief town of the Concelho. It further leads us to Candiapar and after crossing the bridge there, takes us through the concelho of Sanguem, to the gate Tinem, or the Tinaighat, in the Western Ghats. This road enables us to get the railway train at Colem, since a branch of it passing through Molem and Calem takes us there. (5) **Ponda to Margão** — From Ponda a road directly takes us to Margão after crossing the big bridge of Borim over the Juari. Thus we can easily travel in a motor-car from Mapuça to Margão passing through the concelhos of Bardez, Sanquelim, Ponda and Salcete. (6) **Panjim to Cumbarjua and Ponda** — From Panjim, a road goes to the city of Old Goa which is now in ruins, and from here a branch of it takes us to the island of Cumbarjua lying just in the neighbourhood of Tissuari. The main road leads

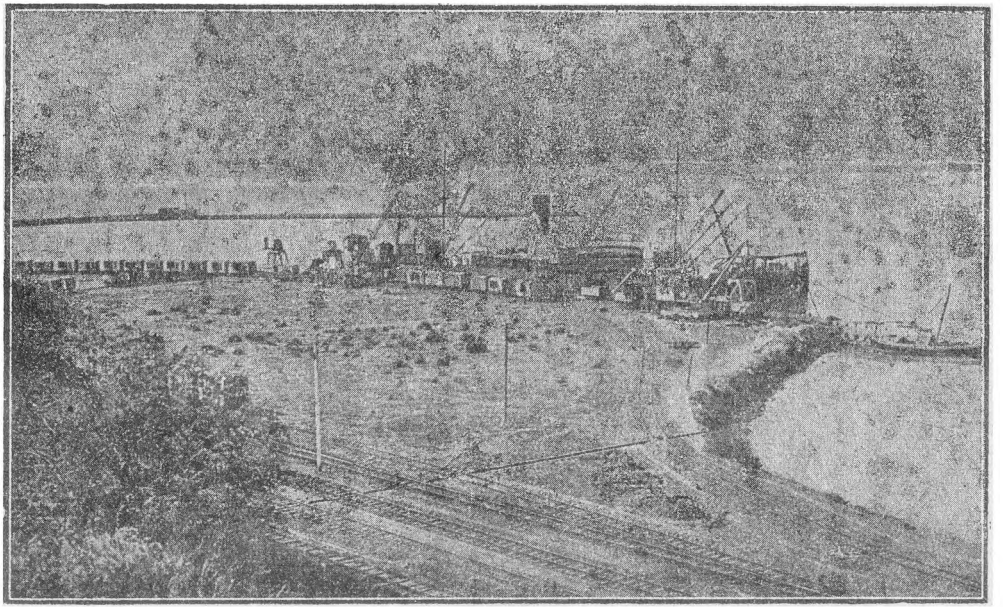
us to Ponda after crossing the bridge of Banastarim which joins the "Ilhas" and the concelho of Ponda. On the way we come across the beautiful Hindu temples of Shri Mangesh and Shri Mhalsa at Mardol. (7) **Mapuça to Verem and Betim** — From Mapuça the old Government road passing through Parra and Saligão takes us to Verem and from here to Betim meeting the new Government road from Mapuça to Betim. At Parra this road takes a branch to Nagoa, Calangute, Candolim and other places. (8) **Margão to Rivona**— From Margão a road leads us to Quepem, Zambaulim and Rivona. (9) **Balli to Sanvordem** — From Balli situated on the road from Margão to Canaccna, a road leads to Quepem and thence to Sanvordem, an important railway station. [10] **Sanvordem to Sanguem** — From Sanvordem a road takes us to Sanguem, the chief town of the concelho. [11] **Cortalim to Mormugão** — A road also goes from Cortalim to Mormugão. (12) **Panjim to Dona Paula** — From Panjim a road leads to Dona Paula.

Thus we can see that travelling on land by motor-car from one concelhc to another is made easy in Goa owing to the roads built by the Government. There are even smaller roads within every concelho which can take us in a motor-car or a garry from one village to another.

From Mapuça, Nova Goa and Margão there are regular motor services to piaces inland and also

outside. The following motor services should be noted: (1) From Mapuça a motor service takes us via Pernem and Naibag to Santarda and Vengurla and to Sawantwadi and thence to Belgaum, Kolhapur, and other places in India. (2) There is a regular motor service between Mapuça and Margão via Sanquelim and Ponda. (2) There is a third motor service between Mapuça and Colem via Sanquelim and Usgão. (4) From Mapuça another service takes us to Belgaum via Dodomaroga, Sanquirval and Sawantwadi. (5) A motor service starting from Panjim takes us to Belgaum via Ponda, Candiapar and Tinaighat passing through Anmode, Londa and Khanapur in India. (6) A motor service from Margão takes us to Karwar.

The Railway in Goa: There is only one railway line in Goa and that is the Western Indian Portuguese Railway or W. I. P. R. This railway starts from the Marmagoa Harbour and passing through the concelhos of Mormugão, Salcete, Quepem and Sanguem enters the Indian territory just near Castle Rock. From Castle Rock it goes to Londa, where it joins the Madras and Southern Maratha Railway or M. & S. M. R. This line starts from Madras and passing through Southern India goes to Hubli, Dharwar and Londa and thence to Poona via Belgaum and Miraj The W. I. P. Railway



MARMAGOA HARBOUR

runs as a branch of the M. & S. M. Railway. The Marmagoa Harbour is the Terminus or goal of this Railway, and Londa is the junction or joining point. Between these places there are the following railway stations :— Vasco da Gama, Dabolim, Cansaulim, Majorda, Margão, Chandor, Sanvordem, Calem, Colem, Sonaulim, Dudhsagar, Caranzol and Castle Rock. Including Mormugão and Londa there are in all fifteen stations of the W. I. P. Railway. There is also a regular local train-service between Marmagoa Harbour and Sanvordrm (Curchorem).

This railway line is of a very great use to Goa. It takes the goods for sale from Goa to other parts of India and bring from them back the goods to be sold in Goa, or to be exported through the Marmagoa Harbour. It also helps the travel in Goa and outside. The length of this railway is fifty miles. From Harbour to Colem, a distance of thirty-eight miles, is almost a lowland gradually rising up. After this the railway line passes through the Ghats in tunnels, rising up to a height of 1287 feet from Colem to Castle Rock. The journey through the Ghats is very delightful, specially during the monsoon, when we come across the beautiful scenery in the Ghats and the famous Dudhsagar waterfalls rushing down the Ghats in torrents and giving rise to innumerable cascades and streams. The railway line is therefore of great importance for trade as well as for travel in Goa and to other parts of India.

The waterways in Goa : The rivers of Goa, as we have already seen, are good waterways of the country. Most of them flow over plains and are always full of water, being fed by the tributaries rising in the Western Ghats. Through these rivers we can travel either in boats or steam-launches. But the steam-launch service run by the Government is limited only to the Mandovi and the Juari. Through almost all the rivers in Goa boats filled with goods run up and down to different places situated on the banks of the rivers and their tributaries. But the steam-launch service is mainly reserved for passengers. The following steam-launch services are to be noted : (1) **Panjim to Sanvordem :** The steam-launch starts from Panjim at eleven in the morning daily except on the tenth, eleventh and the twelfth days of the lunar month when it starts at nine in the morning. It reaches Sanvordem after a journey of about five hours. On the way it stops at Ribandar, Old Goa, Cumbarjua, Cundaim, Marcaim, Und, Durbhat, Borim, Rachol, Manquem and Sanvordem. The service is so arranged as to enable passengers to catch the train at Sanvordem. The steam-launch first passes through the Mandovi, then it crosses the Canal of Cumbarjua and finally enters the Juari through a branch of it. (2) **Panjim to Volvoi:** This service runs between Panjim and Volvoi daily. The intermediate stations for the service are : Ribandar, Old Goa, Carpim,

Piligão and Surla. The service passes through the Mandovi. (3) **Panjim to Aldona**: A steam-launch starts daily from Panjim, and on the way touches Britona, Ecossim, Pomburpa, Ambadi and Calvi. (4) **Dona Paula to Vasco da Gama and Marmagoa**: There is a regular service daily at intervals across the river Juari between these places. (5) **Panjim to Betim and Verem**: A steam-launch and a motor-boat work at regular intervals between Panjim and Betim, and Panjim and Verem. (6) There is also a regular motor-boat service at Agassaim on the Juari and at Colvale on the Chapora.

Besides the steam-launch services through the Mandovi and the Juari there is a passenger-steamer service every day except during the monsoon between Bombay and Nova Goa. At Nova Goa the steamers directly touch the wharf. There is also another service between Bombay and Mangalore via Marmagoa. Besides these there are steamers coming from and going to Africa with passengers. They touch the Marmagoa Harbour. Steamers from other harbours of India and from different parts of the world loaded with goods also touch the Harbour to land down the goods required in Goa. The steamers also take back goods from Goa to the lands from where they come. Thus the part of the Arabian Sea opposite Goa is also used as a water-way by steamers. The steam navigation service for

passengers and goods is made easier owing to the port of Nova Goa and the Marmagoa Harbour which is rising in importance day by day. Big vessels from Bombay, Karachi, Karwar, Mangalore and Cochin, all situated on the western coast of India, bring their cargo to Marmagoa and Panjim and also to the ports of Chapora, Betul and Talpona.

Thus we have seen that owing to the roads, the W. I. P. Railway, the rivers and the sea, inland and foreign travelling and transport of goods are made easier.

EXERCISES

1. How will you travel from Mapuça to Margão or from Mapuça to Valpoi ?
2. What has made Marmagoa a great harbour ?
3. Describe the journey by railway from Marmagoa to Londa.
4. What are the waterways of Goa? How will you travel from Panjim to Sanvordem ?
5. Why is the Railway line so very useful to Goa ?

14. THE TRADE OF GOA

We cannot get all the things we want such as food, clothing, household materials, etc., in our own land. Some of these we have in our own land while others are to be brought from outside. Goa produces some of the necessary articles in large quantities. A part of these we use for our own

purpose, and the rest we send out for sale. We get from other lands the things we need and which they produce in larger quantities. We buy them from these lands. The things we buy and sell are all "goods". This selling and buying is called "trade". We have already seen that roads, railways, rivers and sea-routes are very useful for the purpose of carrying trade. In this lesson we shall see the trade of Goa. We shall learn here what goods Goa sends out to other lands, and what goods other lands send us in return. The goods sent out of Goa make the "exports" of the country, and those brought into it are its "imports".

In the order of their value the exports of Goa go to the following places:— Bombay, America, Belgium, Portugal, England, Germany, France, Madras, Karachi, China and Holland. In the same way, the imports of Goa in the order of their value come from the following places: — Bombay, Rangoon, England, Japan, Karachi, Portuguese Colonies, America, Madras, Germany, Portugal, France, Bengal, Sweden, Holland, Java, Persia, Italy and China. The imports from the Portuguese Colonies come mostly from Mozambique, Macau and Timor. The following are the most important exports of Goa: —

(a) What Goa sends out to other countries.

Cocoanuts: We have already seen that Goa grows cocoanuts in a large number — more than

sufficient for itself. After using a part of these for its own purpose it sends a part of the rest to the different parts of India. The remaining goes both to India and to foreign lands in the form of copra. Goa exports cocoanuts and copra worth more than seven and a half lakhs of rupees.

Caju seeds and Kernel: Next in importance is the export of caju nuts kernel. This is worth about three lakhs of rupees. The caju industry in Goa is now gradually rising, and there is a great demand for the seed in America and Europe, specially for its kernel. This is sent out packed in tins.

Betelnuts: Next in value comes the export of the betelnut. This is worth about a lakh and a half. The concelhos of Ponda, Sanquelim and Canacona are well known for the export of this crop. It mostly goes to the different parts of India.

Salt: Goa produces salt in large quantity and a part of it worth about a lakh and a quarter is exported by railway to other parts of India.

Mangoes: Next in importance comes the export of mangoes. These, worth above a lakh of rupees, are exported every year during the season. They are exported both by railway and by sea-route to India. At present Goa mango cannot compete with that of Ratnagiri and other parts of the Konkan. Owing to heavy customs and export

expenses, it yields a poor income in foreign markets. The cultivation is not well looked after and the trade is without protection ; hence richer quality of the crop is not available.

Dry Fish : Goa exports dry fish worth about three fourths of a lakh. It is mostly sent to India.

Manganese Ore : We have already learnt about this mineral. It is now mostly mined in the concelho of Sanguem and exported in large quantities from Marmagoa Harbour.

Cocum : We have already referred to this article of export, which is mostly produced in the areca palm gardens in the interior of Goa. It is produced in large quantities in the concelhos of Pernem, Sanquelim, Ponda, Sanguem, Quepem and Canacona. It is exported mostly to other parts of India.

(b) What Goa buys from other countries

We have already seen that most of the things Goa needs are to be brought from outside. These are either brought direct or from Bombay, Karachi, Madras, Calcutta and Rangoon, the great ports of India and Burma. They are also brought from great towns and smaller ports of India. These goods are brought in ships and steamers or by railway. The most important goods that Goa imports are the following :—

Rice and Paddy: The rice grown in Goa is sufficient for nearly six to eight months. It is almost two-thirds of the total rice required. The rest has to be imported from other lands. Most of this rice now comes from Rangoon and Bassein, the chief port of Burma. Burma just like Goa gets heavy rainfall, and rice can be easily grown there in rich valleys and on coastal plains. Rice and paddy are also imported from Bombay, Madras, Karachi and Siam.

Wheat and Flour: We need wheat for making bread, chapati and many other articles of food. Wheat mostly comes from the Punjab, Malwa (Central India) and the Deccan. It requires a cooler and drier climate than rice and is grown best in the rich river-plains of Northern India by means of irrigation. It is mostly imported from Karachi.

Other Grains, Oil-seeds and Pulses: These are brought to us from all over India, specially from the Ghats-side. Jwar, bajri, ragi (nachne) are the most important of the grains. They are all millets used for preparing cakes or gruel. Groundnuts, sesamum, linseed, mustard etc. are oil-seeds. From these we get oil. Udidh, mugh, tur, chana, vatana are the Indian names for some of the pulses. "Chána" is gram and "vatanas" are peas. All these are used in preparing different articles of food and sweets. Most of these crops require rich soil and

moderate supply of water. They are imported from Bombay and Karachi.

Chillies and Spices : Goa grows chillies, but a large quantity is also brought from outside, specially from the Ghats-side. Cloves, mustard, turmeric, tamarind, pepper, nutmeg, cinnamon, cardamom etc. are spices. Cloves mostly come from Zanzibar, while other spices come from Ceylon, Java, Sumatra, Malacca and the other spice islands of the East Indies. In India most of the spices are grown in Malabar on the lower slopes of the Western Ghats. They are imported from Bombay, Madras, Java, Singapore, Persia and Zanzibar.

Sugar : Sugar is made from the juice of sugar-cane which is now widely grown in India and specially in the islands of Java and Mauritius. The sugar we use in Goa is brought to us mostly from Mozambique (Portuguese Africa). It is also imported from Java, Japan, Bombay and Karachi.

Jaggery or Gur : Jaggery is mostly imported from places on the Ghats-side. It is also made in Goa, but the industry could not prosper for a long time owing to the cheaper import of jaggery. Yet of late attempts are being made to revive it. Jaggery is made from the juice of sugar-cane by heating it in large pots. It comes to us in big lumps. Sugar is the refined or purer form of jaggery.

Tea and Coffee : Tea is the leaf of a certain plant rolled and dried. It comes to us from the Nilgiri Hills in Southern India, where it is planted in gardens. It is also grown on the slopes of the Himalayas, in Bengal and in the hilly parts of Assam and Ceylon. It is best grown on wet hill-slopes. It comes in tins and boxes. There are different varieties of tea. Coffee is also grown on wet hill-slopes, but the plant being a delicate one cannot thrive on higher slopes, because the chilly weather and strong winds cause it harm. We get coffee out of the berries of the coffee-plant. This plant is grown well in Coorg, Travancore and Malabar. Coffee is imported in berries and powder from Madras, Bombay, East Africa, Bengal and Timor. Tea is imported from Madras, Bombay, Bengal and Mozambique.

Cloth : Cloth is chiefly made from cotton, wool, silk, linen and jute. In India cotton goods are chiefly made in Bombay, Ahmedabad, Sholapur and Madras. They are made in big mills or factories. England and Japan are the most important cotton-manufacturing countries. We buy Indian as well as English and Japanese cotton goods. They are brought in Goa chiefly from Bombay and Madras. They are also ordered direct from England and Japan. Cotton is a white fleecy substance which we get from the bolls of the cotton plant. It is

grown well in India in the black soil of the Deccan table-land. It is also grown in the Punjab. We mostly use cotton cloth because it is cheap, is easily washed and suits our climate. China, Japan, France and Italy are famous for silk. It is obtained from silk-worms. Most of the Indian silk comes from Delhi, the Punjab, Benares, Bengal, Assam and Mysore. Japanese silk is now cheaper than any other silk. Silk is imported from Bombay, Calcutta, China, France and Italy.

Woollen cloth is made of wool, fleecy hair of sheep or goats. In India woollen goods are made mostly in Kashmir, the Punjab and the united Provinces. But they also come to us from England, Japan, Holland, Germany and France. They are brought to Goa from Bombay as well as from the countries mentioned above. Woollen cloth keeps us warm and is therefore chiefly used in cold countries. In India it is to be used only in cool or cold days.

Linen cloth is made out of flax. It is imported chiefly from France. Jute cloth is used in making gunny bags. It is chiefly imported from Bengal, Bombay and Cochin.

Petroleum: Petroleum is mined in Burma, America [U. S. A.], Russia, Rumania, Persia, Sumatra, Assam and the Punjab. There is a kind of

petroleum called kerosene which is used mostly for lamps. The branches of the Standard Oil [America], the Burma Oil and the Asiatic Petroleum [Russia] at Vasco da Gama supply most of the petroleum for Goa. A finer kind of petroleum is used for motor-cars. It is called petrol. Out of petroleum-wax candles are made. We get them chiefly from Burma.

Matches : Matches are made out of soft pine-wood, which easily burns. They are dipped into a kind of fluid made of sulphur. In Sweden and Japan there are large pine forests and sulphur mines; so matches come to us chiefly from these countries. The Three Star matches of Sweden are well-known here.

Rubber goods : Rubber is the juice of the rubber tree. This tree is largely grown in Brazil, Malaya, Burma, Ceylon and Travancore. It grows wild as well as planted. Goods such as tyres, tubes, shoes, toys, erasers etc. are made out of Rubber. They come to us mostly from England, Germany and Japan.

Iron goods and Machinery : These are brought to India from England, Belgium, Germany, America, France, Sweden and Japan. Motor-cars, motor-cycles and bicycles are imported from England, France, Germany and America [U. S. A.]. Watches are made in Switzerland and France. We get these goods either direct or from Bombay. In

India iron goods are made in Jamshedpur (Bihar), Kirloskarwadi (Satara) and Mysore.

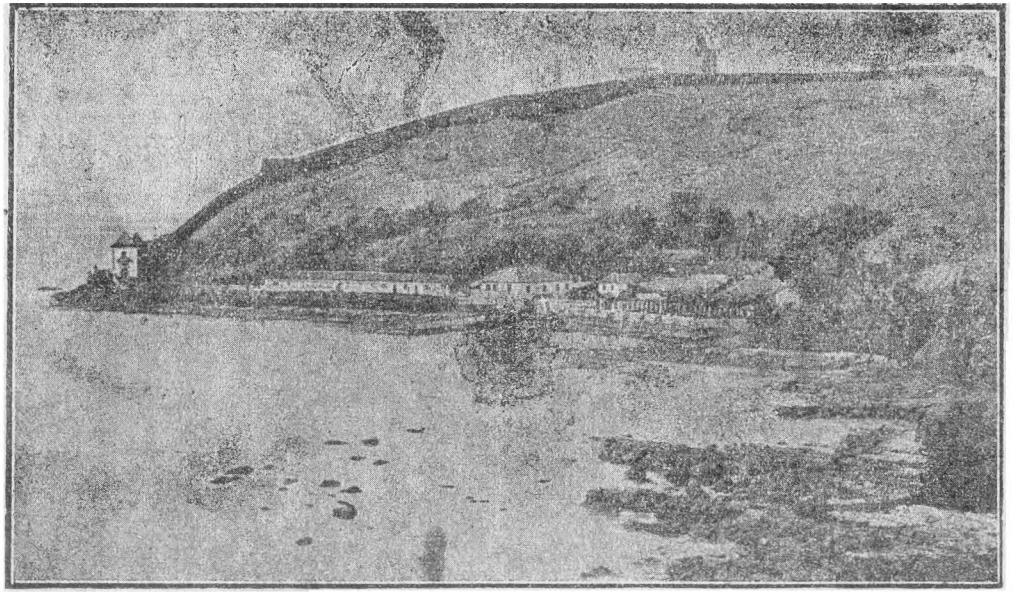
Paper and Stationery goods : Paper is mostly made in Canada, U. S. A., Sweden, Norway, Japan, Germany, England, France and Portugal. It is also made in India. We buy our paper and stationery goods from Bombay, Madras and the Foreign countries mentioned above. Paper is made out of the pulp of the pine, bamboo etc. and also from rags. Pens, pencils, slates, erasers, ink, envelopes etc. are stationery goods. They mostly come from England, U. S. A., Germany, France, Portugal, Bombay and Japan.

Hides, Skins and Leather : We use hides, skins and leather in making boots, shoes, saddles, belts, bags, etc. We get them from other parts of India, specially from Bombay and Madras. We also get leather goods from England, France, Germany and America. In India the Cawnpore leather is well-known.

Goa spends more after its imports than what it gets from its exports. Thus it buys much more than what it sells.

EXERCISES

1. What is trade ? Name the most important countries with which Goa carries on its trade.



THE FORT OF AGUADA

2. What are the most important goods that Goa sends out to other lands ?
3. From where does Goa import rice, cloth, sugar, kerosene, tea and coffee ?
4. How are wool, silk, candles, matches and leather obtained ?

15. THE PLACES OF INTEREST IN GOA.

We find interest in places where something is worth seeing. It may be a place of natural beauty, or a rising town or a harbour. It may as well be a place of religious interest, with its temples, churches or mosques. It may be a city that was once famous in history, Government head-quarters, or a place where some kind of industry or trade flourishes. In Goa we have some such places.

The territory of Goa with Diu and Damão is under the authority of the Governor General of Portuguese India who governs from Nova Goa, the capital of Goa. He is assisted in the work of government and in making laws by a council called the Governor General's Council. Goa is divided into eleven parts or " concelhos " for the purpose of administration, and we may like to see the chief towns or capitals of these " concelhos ". The following are the capitals :

Concelho			Capital
Pernem	....	....	Pernem
Bardez	....	....	Mapuça
Sanquelim	....	....	Bicholim
Satari	....	....	Valpoi
Ilhas	....	....	Nova Goa [Panjim]
Ponda	....	....	Ponda
Mormugão	....	....	Vasco da Gama
Salcete	....	....	Margão
Sanguem	....	....	Sanguem
Quepem	....	....	Quepem
Canacona	....	....	Canacona (Chawdi)

All these towns are the chief seats of the administration of the "concelhos". Here we have the Government Offices, public buildings, markets, workshops, etc. The Chief Government Officer or the head of each concelho is called the "Administrador", who is responsible to the Governor General of Portuguese India. He administers or Governs. His office is called "Administração". Under the Administrators are the officers who rule over villages. Each of them is called "Regedor". He is the head of the village.

Another Office of importance in these towns is the Municipal Office of the Municipality. It is the office that looks after the works of public benefit such as cleaning the streets, repairing the roads,

lighting streets in the towns, public education, health, etc. It gets its money for these works from taxes and from licences for cycles, cars, carts, weights, measures, shops, etc. The chief Governing body of the Municipality is the Municipal Council which consists of a president and members. They supervise the administration and the work of the Municipality. Like the "administrators" of the concelhos the Municipal Councils are responsible to the Governor General.

An office worthy of note in the chief towns of the concelhos is "Administração das Comunidades" i.e. the "Administration of the Communities". The Village Communities are the old village republics in Goa. They were called "Village Panchayats". Even before the conquest of Goa by the Portuguese the villages in Goa were ruled by the people themselves. The five respectable men chosen by the "Sabha" or the general meeting of the people, looked after all the village affairs such as religion, justice, education, health, collection of taxes, keeping the accounts etc. But now these Village Communities have lost much of their old position and glory. They look at present only after village lands, their taxes and accounts. The rest of the work is now managed by the Portuguese Government

through other offices. The chief officer of the Village communities in every concelho is called " Administrador das Comunidades " i. e. the Administrator of Communities. In the New Conquests the Administrators of Concelhos are also Administrators of Communities.

Another office of importance is the Military and Police. Here we find our soldiers and policemen. The head of the military is called " Comandante ". It is he who commands or gives orders to the soldiers and the police. They keep peace and order in each of the concelhos. The police station is called " Quartel ".

Besides these offices, there is " Fazenda " or the Revenue Office. Here we pay our taxes to the Government, wich make its revenue.

Another office in some of the concelhos is the Court of Justice called " Tribunal Judicial ". Here the Judge tries and decides the cases. Above these courts of the judicial areas or " Comarcas " of Goa there is the High Court of Justice at Nova Goa. It is called " Relação ".

Besides these, there are the Registration Offices for the registration of lands and property, for the registration of births, deaths and marriages and for making official deeds in buying, selling, making wills etc. For each of these offices there is an officer who looks after his own work.

Each of the towns of the concelhos is a seat of administration and a centre of trade. We shall learn about some of these important towns of the concelhos of Goa and also about some places of interest in these concelhos.

Nova-Goa (Panjim): This is a beautiful city situated at the mouth of the Mandovi on its southern bank. It is the capital or the chief city of Goa. Being at the mouth of the Mandovi it is a great port and a great centre of trade and commerce. Big vessels loaded with cargo touch the port. They come specially from the ports of India lying on the western coast and take back the exports of Goa. There is a regular passenger service between this city and Bombay during the dry season. Here is the Head Office of the Governor-General of Portuguese India, and all the other Government head offices and public buildings. It is a centre of Portuguese education with many public and private schools and Government schools and colleges. It has a Training College for teachers, a Medical College, the Institute Pasteur, the Lyceum Central, the Technical Institute, Portuguese and Marathi schools and two English High Schools recognized by the University of Bombay.

There is a big Government library called "Biblioteca Nacional" which contains a valuable collection of thousands of books and periodicals of

different languages; but the largest number of these are in Portuguese. There is also a small museum in the library having a number of objects worth seeing. Besides these there are many public institutions in the city, such as the big Marathi library called Shri Saraswati Mandir, the two Marathi primary schools called Shri Mahalaxmi Vidyalaya and Shri Saraswati Vidyalaya, the Urdu school for Mahomedan boys and girls, and the Hindu Kanyashala, a school for Hindu girls. There are some newspapers and printing presses in the city.

The office of "Santa Casa de Misericordia" noted for the sale of its lotteries, the cinema theatre called "Cine-Teatro Nacional", the famous Church in the centre of the city, the Palace of the Patriarch on the hill, the Palace of the Governor-General, the Municipal Office, the General Hospital and the Maternity Hospital and the Lyceum Central are some of the most beautiful buildings worth seeing in the city. The other things worthy of note are the Municipal gardens and the garden situated at Campal with the bronze statue of Francisco Luiz Gomes. The Campal with its beautiful, small, but well planned buildings erected in the squares with the roads passing in between them, and with its tarred road and footpaths by the side of the river Mandovi, presents a very beautiful sight. There is also an Observatory in this city.

The city is nicely planned and the houses are well built and arranged. It has an electric lighting of streets and also some provision for water supply. The main roads in the city are tarred. The whole city presents a very beautiful aspect. It is a great centre of motor service like Mapuça and Margão. From here motor-cars run to all the villages of Tissuari and also to Ponda and Margão. There are also regular steam-launch and motor-boat services between Panjim and Betim and Verem, and to other places on the banks of the Mandovi and the Juari and their tributaries.

At a distance of two miles and eastward from Panjim we come across the suburban village of **Ribandar**. We have already learnt about this place situated on the bank of the Mandovi, in connection with the steam-launch service. We can go to Ribandar either in a motor-car or by a steam-launch. The road going from Nova Goa to Old Goa, Banastarim, Mardol and Ponda passes through it. It is at a distance of nearly ten minutes by motor-car. It is famous for its hospital conducted by "Santa Casa de Misericordia" of Nova Goa. It was started in aid of the poor and helpless and also for the use of the general public. This is one of the famous hospitals of Goa and is noted for its surgical operations. Many patients generally from Ilhas and Bardez flock to it for medical aid.

Margão: Just as Mapuça lies in the middle of Bardez, Margão too lies almost in the middle of Salcete. It is the chief town of the concelho and is a centre of great trade. It is a rising town and a railway station in Goa, and is famous not only as a great centre of inland trade but also of trade with other parts of India and foreign lands. It can command trade both by sea and by land being connected by the railway with the Marmagoa Harbour and with the Ghats-side of the Deccan. The town is well planned and is being extended. It is also a centre of other activities. Besides the Government offices there is a Portuguese Primary School. There are also English High Schools recognized by the Bombay University. There are some printing presses and factories in the city.

Other institutions of great reputation and long standing are the public institutions. The Saraswat Brahman Samaj or the Society of Saraswat Brahmins with its great library and reading room works in its own newly-built edifice. The Damodar Vidyalaya, a Marathi School of long standing and the Mahila Vidyalaya deserve mention. The Adarsha Vanita Vidyalaya or the Ideal High School for Women conducted by the Seva-Samiti or the Service League of Margão is a progressive institution. It is functioning in a well built edifice of its own. Besides these educational institutions,

there is the big charitable hospital and the Sanatorium of "Hospicio", an institution working on the lines of the Santa Casa de Misericordia of Nova Goa. The funds for this charitable work are also collected from the sale of lotteries. There are two markets in the town, the old one and the new one. The new one is closer to the railway station. Just like Mapuça and Nova Goa this town is a big centre of motor service and has its own motor stand. Margão has been a flourishing town since the construction of the W. I. P. Railway. It has also, like Nova Goa and Mapuça, its electric supply for the lighting of streets and buildings.

Marmagoa Harbour : We have already referred to this as a great natural harbour. It is well sheltered from wind and storm by a big hill. It lies at the wide deep mouth of the Juari. It can command the inland trade through the great waterway of Goa as well as the foreign trade by the sea. It is also the terminus of the W. I. P. Railway and has trade with the Ghats-side of the Deccan. It is a natural harbour and stands second to Bombay on the western coast of India. It has a long, strong breakwater built to prevent the rising waves of the sea from rushing in, and thus make the steamers lie in safety. At one end of the breakwater there is a big lighthouse to guide the course

of the ships and steamers during the night. This lighthouse is of the same kind as the one built in the fort of Aguada, situated at the entrance of the Mandovi. On the top of the hill there is a vast plateau, which is used for the aerodrome. The aeroplanes flying on the western coast of India halt here on their way from Bombay to Trivandrum. So Marmagoa is also an air-station. On the hill there is the chief Observatory of Goa. Here the record of the weather, climate and rainfall of Goa is regularly kept and published. Marmagoa has also a grand railway hotel. The harbour is gradually rising in importance owing to its natural situation and being the terminus of the W. I. P. Railway.

Vasco da Gama: This is a rising town in the neighbourhood of Marmagoa Harbour. It is the chief town of the concelho of Mormugão and also a railway station. The town is being well planned and gradually extended after the fashion of Nova Goa. Like Nova Goa and Margão it has a good many beautiful buildings, Government offices and a newly-built market. The town is being extended along the side of the bay at the mouth of the Juari. On the hill-top opposite the Marmagoa Harbour stands the big wireless station of Goa. Besides the Portuguese Government School, there is an English High School recognized by the Bombay University. This town is also the seat of the great branches of

the petroleum companies. They have their petroleum tanks here.

Mapuça : This is a rising town situated at the foot of a hill in Bardez. Being at the centre of the concelho all the roads to its villages start from here. Hence it has become a centre of great trade. The villagers in Bardez come here to sell the products of their villages and to buy the things they need for daily use. Friday is the day of bazaar in Mapuça. On this day even the people of the neighbouring concelhos visit the town for buying or selling things. Mapuça is not only the seat of the government of Bardez but is also a great centre of trade and traffic. There are motor services from this town to all the villages in Bardez and to the surrounding concelhos and even to other parts of India as we have already seen. There is a big motor stand from where cars full of passengers move between Mapuça and Betim at intervals.

The big market of Mapuça, planned in three long rows of shops, is situated at the foot of the hill. The Government offices are built at the top. The town has a Municipal garden and an electric lighting of streets. The Municipal Lyceum and the Portuguese Primary School are the Government educational institutions; whilst the Church of Milagres, the new Hospital of Milagres and the Asylum of Milagres for the poor are the religious

and charitable institutions. The Saraswat Vidyalaya is a public Marathi school, which has its own beautiful edifice. Another public institution is the Jnana Prasarak Sangh, which has a Marathi primary school and library. Another institution of note is the Municipal Library called "Biblioteca Municipal Athaide". This library contains a good number of valuable books and periodicals in Portuguese, English and Marathi. Besides these there are two English High schools recognized by the University of Bombay. There are also some temples and chapels in the town. The English High Schools of Arporá, Parrá, Saligão, Guirim, Aldona, Moira, Siolim and Candolim are not far from this town. They are all recognized by the University of Bombay.

Old Goa: This is an old city and was once the Portuguese capital of Goa. It is now almost in ruins; but it still has some of the beautiful churches and convents noted for their art and architecture. Here in the Convent of Bom Jesus lies the sacred body of Saint Francis Xavier, in devotion to whom a great annual feast is celebrated and a big fair held in the beginning of December. This city is therefore a holy land of the Christians, and has still retained its religious importance. In the neighbourhood of the city there are the sites of the old capitals of Goa once famous in its history. The city and its suburbs have therefore a great historical importance and have passed under the rule of many

a Hindu and Mahomedan ruler. In some of the convents ancient Hindu images, historical writings on stones (inscriptions) etc. are preserved.

Curchorem (Sanvordem): We have already learnt about this place as a railway station. It is now a rising centre of trade and industry. It has a tile factory and an ice factory. It has also mills for sawing wood, husking paddy, grinding corns and extracting oil.

Ponda: Ponda is the capital of the concelho. It is a centre of trade and traffic. The motor services from the concelhos of Bardez, Sanquelim, Satari, Ilhas, Salcete and also those from the Ghats side of India pass through this place. It has Government offices, a Portuguese primary school and an educational institution called " Coiegio Almeida ". This has classes for the study of Portuguese, English and Marathi.

Valpoi: This is a small town at the centre of Satari. It is an important military station. The military was stationed here to put down the risings of the warlike people of the district called the Ranes. They are a hardy brave race of the Marathas mostly residing in the interior of Goa. The military cantonment is situated at the top of the hill. From here the whole of the surrounding hilly district of Satari with its mighty peaks and beautiful scenery presents a grand view. Valpoi is under the command

THE DUDHSAGAR WATERFALLS

of the Chief Military Officer who is also the head of Satari. At the Military station there is a military school where soldiers are trained. There is also an observatory here. The road from Mapuça to Sanquelim and that from Ponda to Usgão and Palli lead to Valpoi as we have already seen. Just at the entrance of the town we come across the famous school of arts and handicrafts which has been recently started by the Government. In the neighbourhood of Valpoi, at Birondem, there is a Portuguese Convent School.

The Hindu Temples of Goa: There are a good many Hindu temples in Goa practically in every concelho just like the Christian churches. Each of these temples has its image of worship and its own model of building. Of all these temples those situated in the concelhos of Ponda and Sanquelim are noted for their beauty of natural surroundings and their art and architecture.

The places of these temples in the concelho of Ponda are Queula, Bandora, Mardol, Mangueshim, Velinga, Shiroda, Candola and Marcela. Most of these temples, with a pillar of light (dipastambha) in front of each, are surrounded by cool, shady areca palm gardens. Each has a lake of its own of clear sweet water with steps on all four sides leading down to it. In the neighbourhood of some of these temples there are fountains and springs of pure

fresh water. These cool, shady, secluded temples are the holiday resorts of many a Gaud Saraswat Brahmin devotee from India and Goa.

The temples in the concelho of Sanquelim are at Sanquelim, Shirgão and Naroa, the last being of great historical importance. The grand annual fair of "Tirtha" is held at a distance of about a mile from this temple. The annual feast and fair at Shirgão is also well known all over Goa.

The temple on the top of the hill Chandranath in Paroda and the other one at Zambaulim in the concelho of Sanguem are also noted for their beautiful surroundings. The former commands a very fine view from the top of the hill. At a short distance from Zambaulim there are the springs of Rivona noted for their fine mineral water.

All these temples have their days of festivities and fairs throughout the year just like those of churches. Big crowds attend these feasts and fairs, which greatly helps trade and traffic.

The Harvalem Waterfalls: These waterfalls are situated at a short distance from Sanquelim on the way to Valpoi. They fall in the valley of the same name. Here there is an ancient Hindu temple. The waterfalls are in the concelho of Sanquelim and fall from a height of about sixty feet. They feed a tributary of the Mandovi. The waterfalls, falling into the deep lake beneath, with areca palm gardens and paddy fields close by, present a very

beautiful sight. A walk through the valley is very pleasant. The waterfalls provide a constant supply of water for irrigation. The valley has also some ancient Budhist caves. On the whole, the spot is a delightful one and may well serve the purpose of a picnic party.

The Dudh-Sagar Waterfalls: We have already spoken about these falls and the peak bearing their name. There was a plan of Portuguese Government to use these falls to generate electricity for the purpose of working factories and lighting the chief towns. But it has not yet been realized.

We have thus seen some of the most important places of interest in Goa. There are others too numerous to be mentioned here. We may well say that Goa is a land of beauty and interest.

EXERCISES

1. How is Goa governed? What is the work of a Municipality?
2. How is justice given in Goa and by whom?
3. Where are Mapuça, Nova-Goa and Valpoi situated? Write briefly what has made them so very important.
4. Why is Old Goa so very famous?
5. What has led to the growth of Margão and Vasco da Gama?
6. Where are feasts and fairs held in Goa and what is their importance?

Editor :-

Dr. Ananta Loximona Matmó

Médico-Cirurgião

Mapuçá.

TIPOGRAFIA "GOMANTA"

de D. A. Caró, Margão-Goa.

A FIRST GEOGRAPHY OF GOA